

(19) World Intellectual Property Organization  
International Bureau



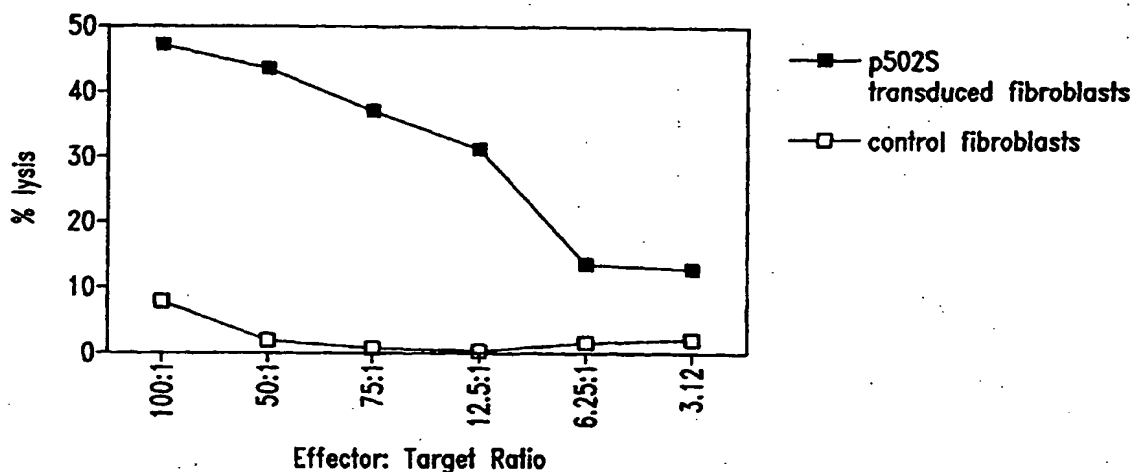
(43) International Publication Date  
12 April 2001 (12.04.2001)

PCT

(10) International Publication Number  
**WO 01/25272 A2**

- (51) International Patent Classification<sup>7</sup>: **C07K 14/00**
- (21) International Application Number: **PCT/US00/27464**
- (22) International Filing Date: **4 October 2000 (04.10.2000)**
- (25) Filing Language: **English**
- (26) Publication Language: **English**
- (30) Priority Data:  
**60/157,455**      **4 October 1999 (04.10.1999)**      **US**
- (71) Applicant (for all designated States except US): **CORIXA CORPORATION [US/US];** Suite 200, 1124 Columbia Street, Seattle, WA 98104 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **XU, Jiangchun [US/US];** 15805 SE 43rd Place, Bellevue, WA 98006 (US). **SKEIKY, Yasir, A., W. [CA/US];** 15106 SE 47th Place, Bellevue, WA 98006 (US). **REED, Steven, G. [US/US];** 2843 - 122nd Place NE, Bellevue, WA 98005 (US). **CHEEVER, Martin, A. [US/US];** 6210 Southeast 22nd, Mercer Island, WA 98040 (US).
- (74) Agents: **POTTER, Jane, E., R. et al.;** Seed Intellectual Property Law Group PLLC, Suite 6300, 701 Fifth Avenue, Seattle, WA 98104-7092 (US).
- (81) Designated States (national): **AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.**
- (84) Designated States (regional): **ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).**
- Published:  
— Without international search report and to be republished upon receipt of that report.
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **COMPOSITIONS AND METHODS FOR THERAPY AND DIAGNOSIS OF PROSTATE CANCER**



(57) Abstract: Compositions and methods for the therapy and diagnosis of cancer, such as prostate cancer, are disclosed. Compositions may comprise one or more prostate tumor proteins, immunogenic portions thereof, or polynucleotides that encode such portions. Alternatively, a therapeutic composition may comprise an antigen presenting cell that expresses a prostate tumor protein, or a T cell that is specific for cells expressing such a protein. Such compositions may be used, for example, for the prevention and treatment of diseases such as prostate cancer. Diagnostic methods based on detecting a prostate tumor protein, or mRNA encoding such a protein, in a sample are also provided.

## COMPOSITIONS AND METHODS FOR THERAPY AND DIAGNOSIS OF PROSTATE CANCER

### TECHNICAL FIELD

The present invention relates generally to therapy and diagnosis of cancer, such as prostate cancer. The invention is more specifically related to polypeptides comprising at least a portion of a prostate tumor protein, and to polynucleotides encoding such polypeptides. Such polypeptides and polynucleotides may be used in vaccines and pharmaceutical compositions for prevention and treatment of prostate cancer, and for the diagnosis and monitoring of such cancers.

### BACKGROUND OF THE INVENTION

Prostate cancer is the most common form of cancer among males, with an estimated incidence of 30% in men over the age of 50. Overwhelming clinical evidence shows that human prostate cancer has the propensity to metastasize to bone, and the disease appears to progress inevitably from androgen dependent to androgen refractory status, leading to increased patient mortality. This prevalent disease is currently the second leading cause of cancer death among men in the U.S.

In spite of considerable research into therapies for the disease, prostate cancer remains difficult to treat. Commonly, treatment is based on surgery and/or radiation therapy, but these methods are ineffective in a significant percentage of cases. Two previously identified prostate specific proteins - prostate specific antigen (PSA) and prostatic acid phosphatase (PAP) - have limited therapeutic and diagnostic potential. For example, PSA levels do not always correlate well with the presence of prostate cancer, being positive in a percentage of non-prostate cancer cases, including benign prostatic hyperplasia (BPH). Furthermore, PSA measurements correlate with prostate volume, and do not indicate the level of metastasis.

In spite of considerable research into therapies for these and other cancers, prostate cancer remains difficult to diagnose and treat effectively. Accordingly, there is a need in the art for improved methods for detecting and treating

such cancers. The present invention fulfills these needs and further provides other related advantages.

## SUMMARY OF THE INVENTION

Briefly stated, the present invention provides compositions and methods for the diagnosis and therapy of cancer, such as prostate cancer. In one aspect, the present invention provides polypeptides comprising at least a portion of a prostate tumor protein, or a variant thereof. Certain portions and other variants are immunogenic, such that the ability of the variant to react with antigen-specific antisera is not substantially diminished. Within certain embodiments, the polypeptide comprises at least an immunogenic portion of a prostate tumor protein, or a variant thereof, wherein the tumor protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of: (a) sequences recited in any one of SEQ ID NOs:1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375, 381, 382 or 384-472; (b) sequences that hybridize to any of the foregoing sequences under moderately stringent conditions; and (c) complements of any of the sequence of (a) or (b). In certain specific embodiments, such a polypeptide comprises at least a portion, or variant thereof, of a tumor protein that includes an amino acid sequence selected from the group consisting of sequences recited in any one of SEQ ID NO: 112-114, 172, 176, 178, 327, 329, 331, 336, 339, 376-380 and 383.

The present invention further provides polynucleotides that encode a polypeptide as described above, or a portion thereof (such as a portion encoding at least 15 amino acid residues of a prostate tumor protein), expression vectors comprising such polynucleotides and host cells transformed or transfected with such expression vectors.

Within other aspects, the present invention provides pharmaceutical compositions comprising a polypeptide or polynucleotide as described above and a physiologically acceptable carrier.

Within a related aspect of the present invention, vaccines are provided. Such vaccines comprise a polypeptide or polynucleotide as described above and a non-specific immune response enhancer.

The present invention further provides pharmaceutical compositions that comprise: (a) an antibody or antigen-binding fragment thereof that specifically binds to a prostate tumor protein; and (b) a physiologically acceptable carrier.

Within further aspects, the present invention provides pharmaceutical compositions comprising: (a) an antigen presenting cell that expresses a polypeptide as described above and (b) a pharmaceutically acceptable carrier or excipient. Antigen presenting cells include dendritic cells, macrophages, monocytes, fibroblasts and B cells.

Within related aspects, vaccines are provided that comprise: (a) an antigen presenting cell that expresses a polypeptide as described above and (b) a non-specific immune response enhancer.

The present invention further provides, in other aspects, fusion proteins that comprise at least one polypeptide as described above, as well as polynucleotides encoding such fusion proteins.

Within related aspects, pharmaceutical compositions comprising a fusion protein, or a polynucleotide encoding a fusion protein, in combination with a physiologically acceptable carrier are provided.

Vaccines are further provided, within other aspects, that comprise a fusion protein, or a polynucleotide encoding a fusion protein, in combination with a non-specific immune response enhancer.

Within further aspects, the present invention provides methods for inhibiting the development of a cancer in a patient, comprising administering to a patient a pharmaceutical composition or vaccine as recited above.

The present invention further provides, within other aspects, methods for removing tumor cells from a biological sample, comprising contacting a biological sample with T cells that specifically react with a prostate tumor protein, wherein the step of contacting is performed under conditions and for a time sufficient to permit the removal of cells expressing the protein from the sample.



Within related aspects, methods are provided for inhibiting the development of a cancer in a patient, comprising administering to a patient a biological sample treated as described above.

Methods are further provided, within other aspects, for stimulating and/or expanding T cells specific for a prostate tumor protein, comprising contacting T cells with one or more of: (i) a polypeptide as described above; (ii) a polynucleotide encoding such a polypeptide; and/or (iii) an antigen presenting cell that expresses such a polypeptide; under conditions and for a time sufficient to permit the stimulation and/or expansion of T cells. Isolated T cell populations comprising T cells prepared as described above are also provided.

Within further aspects, the present invention provides methods for inhibiting the development of a cancer in a patient, comprising administering to a patient an effective amount of a T cell population as described above.

The present invention further provides methods for inhibiting the development of a cancer in a patient, comprising the steps of: (a) incubating CD4<sup>+</sup> and/or CD8<sup>+</sup> T cells isolated from a patient with one or more of: (i) a polypeptide comprising at least an immunogenic portion of a prostate tumor protein; (ii) a polynucleotide encoding such a polypeptide; and (iii) an antigen-presenting cell that expressed such a polypeptide; and (b) administering to the patient an effective amount of the proliferated T cells, and thereby inhibiting the development of a cancer in the patient. Proliferated cells may, but need not, be cloned prior to administration to the patient.

Within further aspects, the present invention provides methods for determining the presence or absence of a cancer in a patient, comprising: (a) contacting a biological sample obtained from a patient with a binding agent that binds to a polypeptide as recited above; (b) detecting in the sample an amount of polypeptide that binds to the binding agent; and (c) comparing the amount of polypeptide with a predetermined cut-off value, and therefrom determining the presence or absence of a cancer in the patient. Within preferred embodiments, the binding agent is an antibody, more preferably a monoclonal antibody. The cancer may be prostate cancer.

The present invention also provides, within other aspects, methods for monitoring the progression of a cancer in a patient. Such methods comprise the steps of: (a) contacting a biological sample obtained from a patient at a first point in time with a binding agent that binds to a polypeptide as recited above; (b) detecting in the sample an amount of polypeptide that binds to the binding agent; (c) repeating steps (a) and (b) using a biological sample obtained from the patient at a subsequent point in time; and (d) comparing the amount of polypeptide detected in step (c) with the amount detected in step (b) and therefrom monitoring the progression of the cancer in the patient.

The present invention further provides, within other aspects, methods for determining the presence or absence of a cancer in a patient, comprising the steps of: (a) contacting a biological sample obtained from a patient with an oligonucleotide that hybridizes to a polynucleotide that encodes a prostate tumor protein; (b) detecting in the sample a level of a polynucleotide, preferably mRNA, that hybridizes to the oligonucleotide; and (c) comparing the level of polynucleotide that hybridizes to the oligonucleotide with a predetermined cut-off value, and therefrom determining the presence or absence of a cancer in the patient. Within certain embodiments, the amount of mRNA is detected via polymerase chain reaction using, for example, at least one oligonucleotide primer that hybridizes to a polynucleotide encoding a polypeptide as recited above, or a complement of such a polynucleotide. Within other embodiments, the amount of mRNA is detected using a hybridization technique, employing an oligonucleotide probe that hybridizes to a polynucleotide that encodes a polypeptide as recited above, or a complement of such a polynucleotide.

In related aspects, methods are provided for monitoring the progression of a cancer in a patient, comprising the steps of: (a) contacting a biological sample obtained from a patient with an oligonucleotide that hybridizes to a polynucleotide that encodes a prostate tumor protein; (b) detecting in the sample an amount of a polynucleotide that hybridizes to the oligonucleotide; (c) repeating steps (a) and (b) using a biological sample obtained from the patient at a subsequent point in time; and (d) comparing the amount of polynucleotide detected in step (c) with the amount

detected in step (b) and therefrom monitoring the progression of the cancer in the patient.

Within further aspects, the present invention provides antibodies, such as monoclonal antibodies, that bind to a polypeptide as described above, as well as diagnostic kits comprising such antibodies. Diagnostic kits comprising one or more oligonucleotide probes or primers as described above are also provided.

These and other aspects of the present invention will become apparent upon reference to the following detailed description and attached drawings. All references disclosed herein are hereby incorporated by reference in their entirety as if each was incorporated individually.

#### BRIEF DESCRIPTION OF THE DRAWINGS AND SEQUENCE IDENTIFIERS

Figure 1 illustrates the ability of T cells to kill fibroblasts expressing the representative prostate tumor polypeptide P502S, as compared to control fibroblasts. The percentage lysis is shown as a series of effector:target ratios, as indicated.

Figures 2A and 2B illustrate the ability of T cells to recognize cells expressing the representative prostate tumor polypeptide P502S. In each case, the number of  $\gamma$ -interferon spots is shown for different numbers of responders. In Figure 2A, data is presented for fibroblasts pulsed with the P2S-12 peptide, as compared to fibroblasts pulsed with a control E75 peptide. In Figure 2B, data is presented for fibroblasts expressing P502S, as compared to fibroblasts expressing HER-2/*neu*.

Figure 3 represents a peptide competition binding assay showing that the P1S#10 peptide, derived from P501S, binds HLA-A2. Peptide P1S#10 inhibits HLA-A2 restricted presentation of fluM58 peptide to CTL clone D150M58 in TNF release bioassay. D150M58 CTL is specific for the HLA-A2 binding influenza matrix peptide fluM58.

Figure 4 illustrates the ability of T cell lines generated from P1S#10 immunized mice to specifically lyse P1S#10-pulsed Jurkat A2Kb targets and P501S-transduced Jurkat A2Kb targets, as compared to EGFP-transduced Jurkat A2Kb. The percent lysis is shown as a series of effector to target ratios, as indicated.

Figure 5 illustrates the ability of a T cell clone to recognize and specifically lyse Jurkat A2Kb cells expressing the representative prostate tumor polypeptide P501S, thereby demonstrating that the P1S#10 peptide may be a naturally processed epitope of the P501S polypeptide.

Figures 6A and 6B are graphs illustrating the specificity of a CD8<sup>+</sup> cell line (3A-1) for a representative prostate tumor antigen (P501S). Figure 6A shows the results of a <sup>51</sup>Cr release assay. The percent specific lysis is shown as a series of effector:target ratios, as indicated. Figure 6B shows the production of interferon-gamma by 3A-1 cells stimulated with autologous B-LCL transduced with P501S, at varying effector:target ratios as indicated.

SEQ ID NO: 1 is the determined cDNA sequence for F1-13

SEQ ID NO: 2 is the determined 3' cDNA sequence for F1-12

SEQ ID NO: 3 is the determined 5' cDNA sequence for F1-12

SEQ ID NO: 4 is the determined 3' cDNA sequence for F1-16

SEQ ID NO: 5 is the determined 3' cDNA sequence for H1-1

SEQ ID NO: 6 is the determined 3' cDNA sequence for H1-9

SEQ ID NO: 7 is the determined 3' cDNA sequence for H1-4

SEQ ID NO: 8 is the determined 3' cDNA sequence for J1-17

SEQ ID NO: 9 is the determined 5' cDNA sequence for J1-17

SEQ ID NO: 10 is the determined 3' cDNA sequence for L1-12

SEQ ID NO: 11 is the determined 5' cDNA sequence for L1-12

SEQ ID NO: 12 is the determined 3' cDNA sequence for N1-1862

SEQ ID NO: 13 is the determined 5' cDNA sequence for N1-1862

SEQ ID NO: 14 is the determined 3' cDNA sequence for J1-13

SEQ ID NO: 15 is the determined 5' cDNA sequence for J1-13

SEQ ID NO: 16 is the determined 3' cDNA sequence for J1-19

SEQ ID NO: 17 is the determined 5' cDNA sequence for J1-19

SEQ ID NO: 18 is the determined 3' cDNA sequence for J1-25

SEQ ID NO: 19 is the determined 5' cDNA sequence for J1-25

SEQ ID NO: 20 is the determined 5' cDNA sequence for J1-24

SEQ ID NO: 21 is the determined 3' cDNA sequence for J1-24  
SEQ ID NO: 22 is the determined 5' cDNA sequence for K1-58  
SEQ ID NO: 23 is the determined 3' cDNA sequence for K1-58  
SEQ ID NO: 24 is the determined 5' cDNA sequence for K1-63  
SEQ ID NO: 25 is the determined 3' cDNA sequence for K1-63  
SEQ ID NO: 26 is the determined 5' cDNA sequence for L1-4  
SEQ ID NO: 27 is the determined 3' cDNA sequence for L1-4  
SEQ ID NO: 28 is the determined 5' cDNA sequence for L1-14  
SEQ ID NO: 29 is the determined 3' cDNA sequence for L1-14  
SEQ ID NO: 30 is the determined 3' cDNA sequence for J1-12  
SEQ ID NO: 31 is the determined 3' cDNA sequence for J1-16  
SEQ ID NO: 32 is the determined 3' cDNA sequence for J1-21  
SEQ ID NO: 33 is the determined 3' cDNA sequence for K1-48  
SEQ ID NO: 34 is the determined 3' cDNA sequence for K1-55  
SEQ ID NO: 35 is the determined 3' cDNA sequence for L1-2  
SEQ ID NO: 36 is the determined 3' cDNA sequence for L1-6  
SEQ ID NO: 37 is the determined 3' cDNA sequence for N1-1858  
SEQ ID NO: 38 is the determined 3' cDNA sequence for N1-1860  
SEQ ID NO: 39 is the determined 3' cDNA sequence for N1-1861  
SEQ ID NO: 40 is the determined 3' cDNA sequence for N1-1864  
SEQ ID NO: 41 is the determined cDNA sequence for P5  
SEQ ID NO: 42 is the determined cDNA sequence for P8  
SEQ ID NO: 43 is the determined cDNA sequence for P9  
SEQ ID NO: 44 is the determined cDNA sequence for P18  
SEQ ID NO: 45 is the determined cDNA sequence for P20  
SEQ ID NO: 46 is the determined cDNA sequence for P29  
SEQ ID NO: 47 is the determined cDNA sequence for P30  
SEQ ID NO: 48 is the determined cDNA sequence for P34  
SEQ ID NO: 49 is the determined cDNA sequence for P36  
SEQ ID NO: 50 is the determined cDNA sequence for P38

SEQ ID NO: 51 is the determined cDNA sequence for P39  
SEQ ID NO: 52 is the determined cDNA sequence for P42  
SEQ ID NO: 53 is the determined cDNA sequence for P47  
SEQ ID NO: 54 is the determined cDNA sequence for P49  
SEQ ID NO: 55 is the determined cDNA sequence for P50  
SEQ ID NO: 56 is the determined cDNA sequence for P53  
SEQ ID NO: 57 is the determined cDNA sequence for P55  
SEQ ID NO: 58 is the determined cDNA sequence for P60  
SEQ ID NO: 59 is the determined cDNA sequence for P64  
SEQ ID NO: 60 is the determined cDNA sequence for P65  
SEQ ID NO: 61 is the determined cDNA sequence for P73  
SEQ ID NO: 62 is the determined cDNA sequence for P75  
SEQ ID NO: 63 is the determined cDNA sequence for P76  
SEQ ID NO: 64 is the determined cDNA sequence for P79  
SEQ ID NO: 65 is the determined cDNA sequence for P84  
SEQ ID NO: 66 is the determined cDNA sequence for P68  
SEQ ID NO: 67 is the determined cDNA sequence for P80  
SEQ ID NO: 68 is the determined cDNA sequence for P82  
SEQ ID NO: 69 is the determined cDNA sequence for U1-3064  
SEQ ID NO: 70 is the determined cDNA sequence for U1-3065  
SEQ ID NO: 71 is the determined cDNA sequence for V1-3692  
SEQ ID NO: 72 is the determined cDNA sequence for 1A-3905  
SEQ ID NO: 73 is the determined cDNA sequence for V1-3686  
SEQ ID NO: 74 is the determined cDNA sequence for R1-2330  
SEQ ID NO: 75 is the determined cDNA sequence for 1B-3976  
SEQ ID NO: 76 is the determined cDNA sequence for V1-3679  
SEQ ID NO: 77 is the determined cDNA sequence for 1G-4736  
SEQ ID NO: 78 is the determined cDNA sequence for 1G-4738  
SEQ ID NO: 79 is the determined cDNA sequence for 1G-4741  
SEQ ID NO: 80 is the determined cDNA sequence for 1G-4744

SEQ ID NO: 81 is the determined cDNA sequence for 1G-4734  
SEQ ID NO: 82 is the determined cDNA sequence for 1H-4774  
SEQ ID NO: 83 is the determined cDNA sequence for 1H-4781  
SEQ ID NO: 84 is the determined cDNA sequence for 1H-4785  
SEQ ID NO: 85 is the determined cDNA sequence for 1H-4787  
SEQ ID NO: 86 is the determined cDNA sequence for 1H-4796  
SEQ ID NO: 87 is the determined cDNA sequence for 1I-4807  
SEQ ID NO: 88 is the determined cDNA sequence for 1I-4810  
SEQ ID NO: 89 is the determined cDNA sequence for 1I-4811  
SEQ ID NO: 90 is the determined cDNA sequence for 1J-4876  
SEQ ID NO: 91 is the determined cDNA sequence for 1K-4884  
SEQ ID NO: 92 is the determined cDNA sequence for 1K-4896  
SEQ ID NO: 93 is the determined cDNA sequence for 1G-4761  
SEQ ID NO: 94 is the determined cDNA sequence for 1G-4762  
SEQ ID NO: 95 is the determined cDNA sequence for 1H-4766  
SEQ ID NO: 96 is the determined cDNA sequence for 1H-4770  
SEQ ID NO: 97 is the determined cDNA sequence for 1H-4771  
SEQ ID NO: 98 is the determined cDNA sequence for 1H-4772  
SEQ ID NO: 99 is the determined cDNA sequence for 1D-4297  
SEQ ID NO: 100 is the determined cDNA sequence for 1D-4309  
SEQ ID NO: 101 is the determined cDNA sequence for 1D.1-4278  
SEQ ID NO: 102 is the determined cDNA sequence for 1D-4288  
SEQ ID NO: 103 is the determined cDNA sequence for 1D-4283  
SEQ ID NO: 104 is the determined cDNA sequence for 1D-4304  
SEQ ID NO: 105 is the determined cDNA sequence for 1D-4296  
SEQ ID NO: 106 is the determined cDNA sequence for 1D-4280  
SEQ ID NO: 107 is the determined full length cDNA sequence for F1-12 (also referred to as P504S)  
SEQ ID NO: 108 is the predicted amino acid sequence for F1-12  
SEQ ID NO: 109 is the determined full length cDNA sequence for J1-17

SEQ ID NO: 110 is the determined full length cDNA sequence for L1-12  
SEQ ID NO: 111 is the determined full length cDNA sequence for N1-1862  
SEQ ID NO: 112 is the predicted amino acid sequence for J1-17  
SEQ ID NO: 113 is the predicted amino acid sequence for L1-12  
SEQ ID NO: 114 is the predicted amino acid sequence for N1-1862  
SEQ ID NO: 115 is the determined cDNA sequence for P89  
SEQ ID NO: 116 is the determined cDNA sequence for P90  
SEQ ID NO: 117 is the determined cDNA sequence for P92  
SEQ ID NO: 118 is the determined cDNA sequence for P95  
SEQ ID NO: 119 is the determined cDNA sequence for P98  
SEQ ID NO: 120 is the determined cDNA sequence for P102  
SEQ ID NO: 121 is the determined cDNA sequence for P110  
SEQ ID NO: 122 is the determined cDNA sequence for P111  
SEQ ID NO: 123 is the determined cDNA sequence for P114  
SEQ ID NO: 124 is the determined cDNA sequence for P115  
SEQ ID NO: 125 is the determined cDNA sequence for P116  
SEQ ID NO: 126 is the determined cDNA sequence for P124  
SEQ ID NO: 127 is the determined cDNA sequence for P126  
SEQ ID NO: 128 is the determined cDNA sequence for P130  
SEQ ID NO: 129 is the determined cDNA sequence for P133  
SEQ ID NO: 130 is the determined cDNA sequence for P138  
SEQ ID NO: 131 is the determined cDNA sequence for P143  
SEQ ID NO: 132 is the determined cDNA sequence for P151  
SEQ ID NO: 133 is the determined cDNA sequence for P156  
SEQ ID NO: 134 is the determined cDNA sequence for P157  
SEQ ID NO: 135 is the determined cDNA sequence for P166  
SEQ ID NO: 136 is the determined cDNA sequence for P176  
SEQ ID NO: 137 is the determined cDNA sequence for P178  
SEQ ID NO: 138 is the determined cDNA sequence for P179  
SEQ ID NO: 139 is the determined cDNA sequence for P185



SEQ ID NO: 140 is the determined cDNA sequence for P192  
SEQ ID NO: 141 is the determined cDNA sequence for P201  
SEQ ID NO: 142 is the determined cDNA sequence for P204  
SEQ ID NO: 143 is the determined cDNA sequence for P208  
SEQ ID NO: 144 is the determined cDNA sequence for P211  
SEQ ID NO: 145 is the determined cDNA sequence for P213  
SEQ ID NO: 146 is the determined cDNA sequence for P219  
SEQ ID NO: 147 is the determined cDNA sequence for P237  
SEQ ID NO: 148 is the determined cDNA sequence for P239  
SEQ ID NO: 149 is the determined cDNA sequence for P248  
SEQ ID NO: 150 is the determined cDNA sequence for P251  
SEQ ID NO: 151 is the determined cDNA sequence for P255  
SEQ ID NO: 152 is the determined cDNA sequence for P256  
SEQ ID NO: 153 is the determined cDNA sequence for P259  
SEQ ID NO: 154 is the determined cDNA sequence for P260  
SEQ ID NO: 155 is the determined cDNA sequence for P263  
SEQ ID NO: 156 is the determined cDNA sequence for P264  
SEQ ID NO: 157 is the determined cDNA sequence for P266  
SEQ ID NO: 158 is the determined cDNA sequence for P270  
SEQ ID NO: 159 is the determined cDNA sequence for P272  
SEQ ID NO: 160 is the determined cDNA sequence for P278  
SEQ ID NO: 161 is the determined cDNA sequence for P105  
SEQ ID NO: 162 is the determined cDNA sequence for P107  
SEQ ID NO: 163 is the determined cDNA sequence for P137  
SEQ ID NO: 164 is the determined cDNA sequence for P194  
SEQ ID NO: 165 is the determined cDNA sequence for P195  
SEQ ID NO: 166 is the determined cDNA sequence for P196  
SEQ ID NO: 167 is the determined cDNA sequence for P220  
SEQ ID NO: 168 is the determined cDNA sequence for P234  
SEQ ID NO: 169 is the determined cDNA sequence for P235

SEQ ID NO: 170 is the determined cDNA sequence for P243  
SEQ ID NO: 171 is the determined cDNA sequence for P703P-DE1  
SEQ ID NO: 172 is the predicted amino acid sequence for P703P-DE1  
SEQ ID NO: 173 is the determined cDNA sequence for P703P-DE2  
SEQ ID NO: 174 is the determined cDNA sequence for P703P-DE6  
SEQ ID NO: 175 is the determined cDNA sequence for P703P-DE13  
SEQ ID NO: 176 is the predicted amino acid sequence for P703P-DE13  
SEQ ID NO: 177 is the determined cDNA sequence for P703P-DE14  
SEQ ID NO: 178 is the predicted amino acid sequence for P703P-DE14  
SEQ ID NO: 179 is the determined extended cDNA sequence for 1G-4736  
SEQ ID NO: 180 is the determined extended cDNA sequence for 1G-4738  
SEQ ID NO: 181 is the determined extended cDNA sequence for 1G-4741  
SEQ ID NO: 182 is the determined extended cDNA sequence for 1G-4744  
SEQ ID NO: 183 is the determined extended cDNA sequence for 1H-4774  
SEQ ID NO: 184 is the determined extended cDNA sequence for 1H-4781  
SEQ ID NO: 185 is the determined extended cDNA sequence for 1H-4785  
SEQ ID NO: 186 is the determined extended cDNA sequence for 1H-4787  
SEQ ID NO: 187 is the determined extended cDNA sequence for 1H-4796  
SEQ ID NO: 188 is the determined extended cDNA sequence for 1I-4807  
SEQ ID NO: 189 is the determined 3' cDNA sequence for 1I-4810  
SEQ ID NO: 190 is the determined 3' cDNA sequence for 1I-4811  
SEQ ID NO: 191 is the determined extended cDNA sequence for 1J-4876  
SEQ ID NO: 192 is the determined extended cDNA sequence for 1K-4884  
SEQ ID NO: 193 is the determined extended cDNA sequence for 1K-4896  
SEQ ID NO: 194 is the determined extended cDNA sequence for 1G-4761  
SEQ ID NO: 195 is the determined extended cDNA sequence for 1G-4762  
SEQ ID NO: 196 is the determined extended cDNA sequence for 1H-4766  
SEQ ID NO: 197 is the determined 3' cDNA sequence for 1H-4770  
  
SEQ ID NO: 198 is the determined 3' cDNA sequence for 1H-4771

SEQ ID NO: 199 is the determined extended cDNA sequence for 1H-4772  
SEQ ID NO: 200 is the determined extended cDNA sequence for 1D-4309  
SEQ ID NO: 201 is the determined extended cDNA sequence for 1D.1-4278  
SEQ ID NO: 202 is the determined extended cDNA sequence for 1D-4288  
SEQ ID NO: 203 is the determined extended cDNA sequence for 1D-4283  
SEQ ID NO: 204 is the determined extended cDNA sequence for 1D-4304  
SEQ ID NO: 205 is the determined extended cDNA sequence for 1D-4296  
SEQ ID NO: 206 is the determined extended cDNA sequence for 1D-4280  
SEQ ID NO: 207 is the determined cDNA sequence for 10-d8fwd  
SEQ ID NO: 208 is the determined cDNA sequence for 10-H10con  
SEQ ID NO: 209 is the determined cDNA sequence for 11-C8rev  
SEQ ID NO: 210 is the determined cDNA sequence for 7.g6fwd  
SEQ ID NO: 211 is the determined cDNA sequence for 7.g6rev  
SEQ ID NO: 212 is the determined cDNA sequence for 8-b5fwd  
SEQ ID NO: 213 is the determined cDNA sequence for 8-b5rev  
SEQ ID NO: 214 is the determined cDNA sequence for 8-b6fwd  
SEQ ID NO: 215 is the determined cDNA sequence for 8-b6 rev  
SEQ ID NO: 216 is the determined cDNA sequence for 8-d4fwd  
SEQ ID NO: 217 is the determined cDNA sequence for 8-d9rev  
SEQ ID NO: 218 is the determined cDNA sequence for 8-g3fwd  
SEQ ID NO: 219 is the determined cDNA sequence for 8-g3rev  
SEQ ID NO: 220 is the determined cDNA sequence for 8-h11rev  
SEQ ID NO: 221 is the determined cDNA sequence for g-f12fwd  
SEQ ID NO: 222 is the determined cDNA sequence for g-f3rev  
SEQ ID NO: 223 is the determined cDNA sequence for P509S  
SEQ ID NO: 224 is the determined cDNA sequence for P510S  
SEQ ID NO: 225 is the determined cDNA sequence for P703DE5  
SEQ ID NO: 226 is the determined cDNA sequence for 9-A11  
SEQ ID NO: 227 is the determined cDNA sequence for 8-C6  
SEQ ID NO: 228 is the determined cDNA sequence for 8-H7

SEQ ID NO: 229 is the determined cDNA sequence for JPTPN13  
SEQ ID NO: 230 is the determined cDNA sequence for JPTPN14  
SEQ ID NO: 231 is the determined cDNA sequence for JPTPN23  
SEQ ID NO: 232 is the determined cDNA sequence for JPTPN24  
SEQ ID NO: 233 is the determined cDNA sequence for JPTPN25  
SEQ ID NO: 234 is the determined cDNA sequence for JPTPN30  
SEQ ID NO: 235 is the determined cDNA sequence for JPTPN34  
SEQ ID NO: 236 is the determined cDNA sequence for PTPN35  
SEQ ID NO: 237 is the determined cDNA sequence for JPTPN36  
SEQ ID NO: 238 is the determined cDNA sequence for JPTPN38  
SEQ ID NO: 239 is the determined cDNA sequence for JPTPN39  
SEQ ID NO: 240 is the determined cDNA sequence for JPTPN40  
SEQ ID NO: 241 is the determined cDNA sequence for JPTPN41  
SEQ ID NO: 242 is the determined cDNA sequence for JPTPN42  
SEQ ID NO: 243 is the determined cDNA sequence for JPTPN45  
SEQ ID NO: 244 is the determined cDNA sequence for JPTPN46  
SEQ ID NO: 245 is the determined cDNA sequence for JPTPN51  
SEQ ID NO: 246 is the determined cDNA sequence for JPTPN56  
SEQ ID NO: 247 is the determined cDNA sequence for PTPN64  
SEQ ID NO: 248 is the determined cDNA sequence for JPTPN65  
SEQ ID NO: 249 is the determined cDNA sequence for JPTPN67  
SEQ ID NO: 250 is the determined cDNA sequence for JPTPN76  
SEQ ID NO: 251 is the determined cDNA sequence for JPTPN84  
SEQ ID NO: 252 is the determined cDNA sequence for JPTPN85  
SEQ ID NO: 253 is the determined cDNA sequence for JPTPN86  
SEQ ID NO: 254 is the determined cDNA sequence for JPTPN87  
SEQ ID NO: 255 is the determined cDNA sequence for JPTPN88  
SEQ ID NO: 256 is the determined cDNA sequence for JP1F1  
SEQ ID NO: 257 is the determined cDNA sequence for JP1F2  
SEQ ID NO: 258 is the determined cDNA sequence for JP1C2

SEQ ID NO: 259 is the determined cDNA sequence for JP1B1  
SEQ ID NO: 260 is the determined cDNA sequence for JP1B2  
SEQ ID NO: 261 is the determined cDNA sequence for JP1D3  
SEQ ID NO: 262 is the determined cDNA sequence for JP1A4  
SEQ ID NO: 263 is the determined cDNA sequence for JP1F5  
SEQ ID NO: 264 is the determined cDNA sequence for JP1E6  
SEQ ID NO: 265 is the determined cDNA sequence for JP1D6  
SEQ ID NO: 266 is the determined cDNA sequence for JP1B5  
SEQ ID NO: 267 is the determined cDNA sequence for JP1A6  
SEQ ID NO: 268 is the determined cDNA sequence for JP1E8  
SEQ ID NO: 269 is the determined cDNA sequence for JP1D7  
SEQ ID NO: 270 is the determined cDNA sequence for JP1D9  
SEQ ID NO: 271 is the determined cDNA sequence for JP1C10  
SEQ ID NO: 272 is the determined cDNA sequence for JP1A9  
SEQ ID NO: 273 is the determined cDNA sequence for JP1F12  
SEQ ID NO: 274 is the determined cDNA sequence for JP1E12  
SEQ ID NO: 275 is the determined cDNA sequence for JP1D11  
SEQ ID NO: 276 is the determined cDNA sequence for JP1C11  
SEQ ID NO: 277 is the determined cDNA sequence for JP1C12  
SEQ ID NO: 278 is the determined cDNA sequence for JP1B12  
SEQ ID NO: 279 is the determined cDNA sequence for JP1A12  
SEQ ID NO: 280 is the determined cDNA sequence for JP8G2  
SEQ ID NO: 281 is the determined cDNA sequence for JP8H1  
SEQ ID NO: 282 is the determined cDNA sequence for JP8H2  
SEQ ID NO: 283 is the determined cDNA sequence for JP8A3  
SEQ ID NO: 284 is the determined cDNA sequence for JP8A4  
SEQ ID NO: 285 is the determined cDNA sequence for JP8C3  
SEQ ID NO: 286 is the determined cDNA sequence for JP8G4  
SEQ ID NO: 287 is the determined cDNA sequence for JP8B6  
SEQ ID NO: 288 is the determined cDNA sequence for JP8D6

SEQ ID NO: 289 is the determined cDNA sequence for JP8F5  
SEQ ID NO: 290 is the determined cDNA sequence for JP8A8  
SEQ ID NO: 291 is the determined cDNA sequence for JP8C7  
SEQ ID NO: 292 is the determined cDNA sequence for JP8D7  
SEQ ID NO: 293 is the determined cDNA sequence for P8D8  
SEQ ID NO: 294 is the determined cDNA sequence for JP8E7  
SEQ ID NO: 295 is the determined cDNA sequence for JP8F8  
SEQ ID NO: 296 is the determined cDNA sequence for JP8G8  
SEQ ID NO: 297 is the determined cDNA sequence for JP8B10  
SEQ ID NO: 298 is the determined cDNA sequence for JP8C10  
SEQ ID NO: 299 is the determined cDNA sequence for JP8E9  
SEQ ID NO: 300 is the determined cDNA sequence for JP8E10  
SEQ ID NO: 301 is the determined cDNA sequence for JP8F9  
SEQ ID NO: 302 is the determined cDNA sequence for JP8H9  
SEQ ID NO: 303 is the determined cDNA sequence for JP8C12  
SEQ ID NO: 304 is the determined cDNA sequence for JP8E11  
SEQ ID NO: 305 is the determined cDNA sequence for JP8E12  
SEQ ID NO: 306 is the amino acid sequence for the peptide PS2#12  
SEQ ID NO: 307 is the determined cDNA sequence for P711P  
SEQ ID NO: 308 is the determined cDNA sequence for P712P  
SEQ ID NO: 309 is the determined cDNA sequence for CLONE23  
SEQ ID NO: 310 is the determined cDNA sequence for P774P  
SEQ ID NO: 311 is the determined cDNA sequence for P775P  
SEQ ID NO: 312 is the determined cDNA sequence for P715P  
SEQ ID NO: 313 is the determined cDNA sequence for P710P  
SEQ ID NO: 314 is the determined cDNA sequence for P767P  
SEQ ID NO: 315 is the determined cDNA sequence for P768P  
SEQ ID NO: 316-325 are the determined cDNA sequences of previously isolated genes  
SEQ ID NO: 326 is the determined cDNA sequence for P703PDE5  
SEQ ID NO: 327 is the predicted amino acid sequence for P703PDE5

SEQ ID NO: 328 is the determined cDNA sequence for P703P6.26  
SEQ ID NO: 329 is the predicted amino acid sequence for P703P6.26  
SEQ ID NO: 330 is the determined cDNA sequence for P703PX-23  
SEQ ID NO: 331 is the predicted amino acid sequence for P703PX-23  
SEQ ID NO: 332 is the determined full length cDNA sequence for P509S  
SEQ ID NO: 333 is the determined extended cDNA sequence for P707P (also referred to as 11-C9)  
SEQ ID NO: 334 is the determined cDNA sequence for P714P  
SEQ ID NO: 335 is the determined cDNA sequence for P705P (also referred to as 9-F3)  
SEQ ID NO: 336 is the predicted amino acid sequence for P705P  
SEQ ID NO: 337 is the amino acid sequence of the peptide P1S#10  
SEQ ID NO: 338 is the amino acid sequence of the peptide p5  
SEQ ID NO: 339 is the predicted amino acid sequence of P509S  
SEQ ID NO: 340 is the determined cDNA sequence for P778P  
SEQ ID NO: 341 is the determined cDNA sequence for P786P  
SEQ ID NO: 342 is the determined cDNA sequence for P789P  
SEQ ID NO: 343 is the determined cDNA sequence for a clone showing homology to Homo sapiens MM46 mRNA  
SEQ ID NO: 344 is the determined cDNA sequence for a clone showing homology to Homo sapiens TNF-alpha stimulated ABC protein (ABC50) mRNA  
SEQ ID NO: 345 is the determined cDNA sequence for a clone showing homology to Homo sapiens mRNA for E-cadherin  
SEQ ID NO: 346 is the determined cDNA sequence for a clone showing homology to Human nuclear-encoded mitochondrial serine hydroxymethyltransferase (SHMT)  
SEQ ID NO: 347 is the determined cDNA sequence for a clone showing homology to Homo sapiens natural resistance-associated macrophage protein2 (NRAMP2)  
SEQ ID NO: 348 is the determined cDNA sequence for a clone showing homology to Homo sapiens phosphoglucomutase-related protein (PGMRP)

SEQ ID NO: 349 is the determined cDNA sequence for a clone showing homology to Human mRNA for proteosome subunit p40

SEQ ID NO: 350 is the determined cDNA sequence for P777P

SEQ ID NO: 351 is the determined cDNA sequence for P779P

SEQ ID NO: 352 is the determined cDNA sequence for P790P

SEQ ID NO: 353 is the determined cDNA sequence for P784P

SEQ ID NO: 354 is the determined cDNA sequence for P776P

SEQ ID NO: 355 is the determined cDNA sequence for P780P

SEQ ID NO: 356 is the determined cDNA sequence for P544S

SEQ ID NO: 357 is the determined cDNA sequence for P745S

SEQ ID NO: 358 is the determined cDNA sequence for P782P

SEQ ID NO: 359 is the determined cDNA sequence for P783P

SEQ ID NO: 360 is the determined cDNA sequence for unknown 17984

SEQ ID NO: 361 is the determined cDNA sequence for P787P

SEQ ID NO: 362 is the determined cDNA sequence for P788P

SEQ ID NO: 363 is the determined cDNA sequence for unknown 17994

SEQ ID NO: 364 is the determined cDNA sequence for P781P

SEQ ID NO: 365 is the determined cDNA sequence for P785P

SEQ ID NO: 366-375 are the determined cDNA sequences for splice variants of B305D.

SEQ ID NO: 376 is the predicted amino acid sequence encoded by the sequence of SEQ ID NO: 366.

SEQ ID NO: 377 is the predicted amino acid sequence encoded by the sequence of SEQ ID NO: 372.

SEQ ID NO: 378 is the predicted amino acid sequence encoded by the sequence of SEQ ID NO: 373.

SEQ ID NO: 379 is the predicted amino acid sequence encoded by the sequence of SEQ ID NO: 374.

SEQ ID NO: 380 is the predicted amino acid sequence encoded by the sequence of SEQ ID NO: 375.



SEQ ID NO: 381 is the determined cDNA sequence for B716P.  
SEQ ID NO: 382 is the determined full-length cDNA sequence for P711P.  
SEQ ID NO: 383 is the predicted amino acid sequence for P711P.  
SEQ ID NO: 384 is the cDNA sequence for P1000C.  
SEQ ID NO: 385 is the cDNA sequence for CGI-82.  
SEQ ID NO:386 is the cDNA sequence for 23320.  
SEQ ID NO:387 is the cDNA sequence for CGI-69.  
SEQ ID NO:388 is the cDNA sequence for L-idoitol-2-dehydrogenase.  
SEQ ID NO:389 is the cDNA sequence for 23379.  
SEQ ID NO:390 is the cDNA sequence for 23381.  
SEQ ID NO:391 is the cDNA sequence for KIAA0122.  
SEQ ID NO:392 is the cDNA sequence for 23399.  
SEQ ID NO:393 is the cDNA sequence for a previously identified gene.  
SEQ ID NO:394 is the cDNA sequence for HCLBP.  
SEQ ID NO:395 is the cDNA sequence for transglutaminase.  
SEQ ID NO:396 is the cDNA sequence for a previously identified gene.  
SEQ ID NO:397 is the cDNA sequence for PAP.  
SEQ ID NO:398 is the cDNA sequence for Ets transcription factor PDEF.  
SEQ ID NO:399 is the cDNA sequence for hTGR.  
SEQ ID NO:400 is the cDNA sequence for KIAA0295.  
SEQ ID NO:401 is the cDNA sequence for 22545.  
SEQ ID NO:402 is the cDNA sequence for 22547.  
SEQ ID NO:403 is the cDNA sequence for 22548.  
SEQ ID NO:404 is the cDNA sequence for 22550.  
SEQ ID NO:405 is the cDNA sequence for 22551.  
SEQ ID NO:406 is the cDNA sequence for 22552.  
SEQ ID NO:407 is the cDNA sequence for 22553.  
SEQ ID NO:408 is the cDNA sequence for 22558.  
SEQ ID NO:409 is the cDNA sequence for 22562.  
SEQ ID NO:410 is the cDNA sequence for 22565.

SEQ ID NO:411 is the cDNA sequence for 22567.  
SEQ ID NO:412 is the cDNA sequence for 22568.  
SEQ ID NO:413 is the cDNA sequence for 22570.  
SEQ ID NO:414 is the cDNA sequence for 22571.  
SEQ ID NO:415 is the cDNA sequence for 22572.  
SEQ ID NO:416 is the cDNA sequence for 22573.  
SEQ ID NO:417 is the cDNA sequence for 22573.  
SEQ ID NO:418 is the cDNA sequence for 22575.  
SEQ ID NO:419 is the cDNA sequence for 22580.  
SEQ ID NO:420 is the cDNA sequence for 22581.  
SEQ ID NO:421 is the cDNA sequence for 22582.  
SEQ ID NO:422 is the cDNA sequence for 22583.  
SEQ ID NO:423 is the cDNA sequence for 22584.  
SEQ ID NO:424 is the cDNA sequence for 22585.  
SEQ ID NO:425 is the cDNA sequence for 22586.  
SEQ ID NO:426 is the cDNA sequence for 22587.  
SEQ ID NO:427 is the cDNA sequence for 22588.  
SEQ ID NO:428 is the cDNA sequence for 22589.  
SEQ ID NO:429 is the cDNA sequence for 22590.  
SEQ ID NO:430 is the cDNA sequence for 22591.  
SEQ ID NO:431 is the cDNA sequence for 22592.  
SEQ ID NO:432 is the cDNA sequence for 22593.  
SEQ ID NO:433 is the cDNA sequence for 22594.  
SEQ ID NO:434 is the cDNA sequence for 22595.  
SEQ ID NO:435 is the cDNA sequence for 22596.  
SEQ ID NO:436 is the cDNA sequence for 22847.  
SEQ ID NO:437 is the cDNA sequence for 22848.  
SEQ ID NO:438 is the cDNA sequence for 22849.  
SEQ ID NO:439 is the cDNA sequence for 22851.  
SEQ ID NO:440 is the cDNA sequence for 22852.

SEQ ID NO:441 is the cDNA sequence for 22853.  
SEQ ID NO:442 is the cDNA sequence for 22854.  
SEQ ID NO:443 is the cDNA sequence for 22855.  
SEQ ID NO:444 is the cDNA sequence for 22856.  
SEQ ID NO:445 is the cDNA sequence for 22857.  
SEQ ID NO:446 is the cDNA sequence for 23601.  
SEQ ID NO:447 is the cDNA sequence for 23602.  
SEQ ID NO:448 is the cDNA sequence for 23605.  
SEQ ID NO:449 is the cDNA sequence for 23606.  
SEQ ID NO:450 is the cDNA sequence for 23612.  
SEQ ID NO:451 is the cDNA sequence for 23614.  
SEQ ID NO:452 is the cDNA sequence for 23618.  
SEQ ID NO:453 is the cDNA sequence for 23622.  
SEQ ID NO:454 is the cDNA sequence for folate hydrolase.  
SEQ ID NO:455 is the cDNA sequence for LIM protein.  
SEQ ID NO:456 is the cDNA sequence for a known gene.  
SEQ ID NO:457 is the cDNA sequence for a known gene.  
SEQ ID NO:458 is the cDNA sequence for a previously identified gene.  
SEQ ID NO:459 is the cDNA sequence for 23045.  
SEQ ID NO:460 is the cDNA sequence for 23032.  
SEQ ID NO:461 is the cDNA sequence for 23054.  
SEQ ID NOs:462-467 are cDNA sequences for known genes.  
SEQ ID NOs:468-471 are cDNA sequences for P710P.  
SEQ ID NO:472 is a cDNA sequence for P1001C.  
SEQ ID NO:473 is the amino acid sequence for PSMA.  
SEQ ID NO:474 is the amino acid sequence for PAP.  
SEQ ID NO:475 is the amino acid sequence for PSA.  
SEQ ID NO:476 is the amino acid sequence for a fusion protein containing PSA, P703P and P501S.

## DETAILED DESCRIPTION OF THE INVENTION

As noted above, the present invention is generally directed to compositions and methods for the therapy and diagnosis of cancer, such as prostate cancer. The compositions described herein may include prostate tumor polypeptides, polynucleotides encoding such polypeptides, binding agents such as antibodies, antigen presenting cells (APCs) and/or immune system cells (*e.g.*, T cells). Polypeptides of the present invention generally comprise at least a portion (such as an immunogenic portion) of a prostate tumor protein or a variant thereof. A "prostate tumor protein" is a protein that is expressed in prostate tumor cells at a level that is at least two fold, and preferably at least five fold, greater than the level of expression in a normal tissue, as determined using a representative assay provided herein. Certain prostate tumor proteins are tumor proteins that react detectably (within an immunoassay, such as an ELISA or Western blot) with antisera of a patient afflicted with prostate cancer. Polynucleotides of the subject invention generally comprise a DNA or RNA sequence that encodes all or a portion of such a polypeptide, or that is complementary to such a sequence. Antibodies are generally immune system proteins, or antigen-binding fragments thereof, that are capable of binding to a polypeptide as described above. Antigen presenting cells include dendritic cells, macrophages, monocytes, fibroblasts and B-cells that express a polypeptide as described above. T cells that may be employed within such compositions are generally T cells that are specific for a polypeptide as described above.

The present invention is based on the discovery of human prostate tumor proteins. Sequences of polynucleotides encoding certain tumor proteins, or portions thereof, are provided in SEQ ID NOs:1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375, 381, 382 or 384-472. Sequences of polypeptides comprising at least a portion of a tumor protein are provided in SEQ ID NOs:112-114, 172, 176, 178, 327, 329, 331, 336, 339, 376-380 and 383.

### PROSTATE TUMOR PROTEIN POLYNUCLEOTIDES

Any polynucleotide that encodes a prostate tumor protein or a portion or other variant thereof as described herein is encompassed by the present invention. Preferred polynucleotides comprise at least 15 consecutive nucleotides, preferably at least 30 consecutive nucleotides and more preferably at least 45 consecutive nucleotides, that encode a portion of a prostate tumor protein. More preferably, a polynucleotide encodes an immunogenic portion of a prostate tumor protein. Polynucleotides complementary to any such sequences are also encompassed by the present invention. Polynucleotides may be single-stranded (coding or antisense) or double-stranded, and may be DNA (genomic, cDNA or synthetic) or RNA molecules. RNA molecules include HnRNA molecules, which contain introns and correspond to a DNA molecule in a one-to-one manner, and mRNA molecules, which do not contain introns. Additional coding or non-coding sequences may, but need not, be present within a polynucleotide of the present invention, and a polynucleotide may, but need not, be linked to other molecules and/or support materials.

Polynucleotides may comprise a native sequence (*i.e.*, an endogenous sequence that encodes a prostate tumor protein or a portion thereof) or may comprise a variant of such a sequence. Polynucleotide variants may contain one or more substitutions, additions, deletions and/or insertions such that the immunogenicity of the encoded polypeptide is not diminished, relative to a native tumor protein. The effect on the immunogenicity of the encoded polypeptide may generally be assessed as described herein. Variants preferably exhibit at least about 70% identity, more preferably at least about 80% identity and most preferably at least about 90% identity to a polynucleotide sequence that encodes a native prostate tumor protein or a portion thereof.

Two polynucleotide or polypeptide sequences are said to be "identical" if the sequence of nucleotides or amino acids in the two sequences is the same when aligned for maximum correspondence as described below. Comparisons between two sequences are typically performed by comparing the sequences over a comparison window to identify and compare local regions of sequence similarity. A "comparison window" as used herein, refers to a segment of at least about 20 contiguous positions,

usually 30 to about 75, 40 to about 50, in which a sequence may be compared to a reference sequence of the same number of contiguous positions after the two sequences are optimally aligned.

Optimal alignment of sequences for comparison may be conducted using the Megalign program in the Lasergene suite of bioinformatics software (DNASTAR, Inc., Madison, WI), using default parameters. This program embodies several alignment schemes described in the following references: Dayhoff, M.O. (1978) A model of evolutionary change in proteins – Matrices for detecting distant relationships. In Dayhoff, M.O. (ed.) *Atlas of Protein Sequence and Structure*, National Biomedical Research Foundation, Washington DC Vol. 5, Suppl. 3, pp. 345-358; Hein J. (1990) Unified Approach to Alignment and Phylogenies pp. 626-645 *Methods in Enzymology* vol. 183, Academic Press, Inc., San Diego, CA; Higgins, D.G. and Sharp, P.M. (1989) *CABIOS* 5:151-153; Myers, E.W. and Muller W. (1988) *CABIOS* 4:11-17; Robinson, E.D. (1971) *Comb. Theor* 11:105; Santou, N. Nes, M. (1987) *Mol. Biol. Evol.* 4:406-425; Sneath, P.H.A. and Sokal, R.R. (1973) *Numerical Taxonomy – the Principles and Practice of Numerical Taxonomy*, Freeman Press, San Francisco, CA; Wilbur, W.J. and Lipman, D.J. (1983) *Proc. Natl. Acad., Sci. USA* 80:726-730.

Preferably, the “percentage of sequence identity” is determined by comparing two optimally aligned sequences over a window of comparison of at least 20 positions, wherein the portion of the polynucleotide or polypeptide sequence in the comparison window may comprise additions or deletions (*i.e.*, gaps) of 20 percent or less, usually 5 to 15 percent, or 10 to 12 percent, as compared to the reference sequences (which does not comprise additions or deletions) for optimal alignment of the two sequences. The percentage is calculated by determining the number of positions at which the identical nucleic acid bases or amino acid residue occurs in both sequences to yield the number of matched positions, dividing the number of matched positions by the total number of positions in the reference sequence (*i.e.*, the window size) and multiplying the results by 100 to yield the percentage of sequence identity.

Variants may also, or alternatively, be substantially homologous to a native gene, or a portion or complement thereof. Such polynucleotide variants are

capable of hybridizing under moderately stringent conditions to a naturally occurring DNA sequence encoding a native prostate tumor protein (or a complementary sequence). Suitable moderately stringent conditions include prewashing in a solution of 5 X SSC, 0.5% SDS, 1.0 mM EDTA (pH 8.0); hybridizing at 50°C-65°C, 5 X SSC, overnight; followed by washing twice at 65°C for 20 minutes with each of 2X, 0.5X and 0.2X SSC containing 0.1% SDS.

It will be appreciated by those of ordinary skill in the art that, as a result of the degeneracy of the genetic code, there are many nucleotide sequences that encode a polypeptide as described herein. Some of these polynucleotides bear minimal homology to the nucleotide sequence of any native gene. Nonetheless, polynucleotides that vary due to differences in codon usage are specifically contemplated by the present invention. Further, alleles of the genes comprising the polynucleotide sequences provided herein are within the scope of the present invention. Alleles are endogenous genes that are altered as a result of one or more mutations, such as deletions, additions and/or substitutions of nucleotides. The resulting mRNA and protein may, but need not, have an altered structure or function. Alleles may be identified using standard techniques (such as hybridization, amplification and/or database sequence comparison).

Polynucleotides may be prepared using any of a variety of techniques. For example, a polynucleotide may be identified, as described in more detail below, by screening a microarray of cDNAs for tumor-associated expression (*i.e.*, expression that is at least five fold greater in a prostate tumor than in normal tissue, as determined using a representative assay provided herein). Such screens may be performed using a Synteni microarray (Palo Alto, CA) according to the manufacturer's instructions (and essentially as described by Schena et al., *Proc. Natl. Acad. Sci. USA* 93:10614-10619, 1996 and Heller et al., *Proc. Natl. Acad. Sci. USA* 94:2150-2155, 1997). Alternatively, polypeptides may be amplified from cDNA prepared from cells expressing the proteins described herein, such as prostate tumor cells. Such polynucleotides may be amplified via polymerase chain reaction (PCR). For this approach, sequence-specific primers may be designed based on the sequences provided herein, and may be purchased or synthesized.

An amplified portion may be used to isolate a full length gene from a suitable library (e.g., a prostate tumor cDNA library) using well known techniques. Within such techniques, a library (cDNA or genomic) is screened using one or more polynucleotide probes or primers suitable for amplification. Preferably, a library is size-selected to include larger molecules. Random primed libraries may also be preferred for identifying 5' and upstream regions of genes. Genomic libraries are preferred for obtaining introns and extending 5' sequences.

For hybridization techniques, a partial sequence may be labeled (e.g., by nick-translation or end-labeling with  $^{32}\text{P}$ ) using well known techniques. A bacterial or bacteriophage library is then screened by hybridizing filters containing denatured bacterial colonies (or lawns containing phage plaques) with the labeled probe (see Sambrook et al., *Molecular Cloning: A Laboratory Manual*, Cold Spring Harbor Laboratories, Cold Spring Harbor, NY, 1989). Hybridizing colonies or plaques are selected and expanded, and the DNA is isolated for further analysis. cDNA clones may be analyzed to determine the amount of additional sequence by, for example, PCR using a primer from the partial sequence and a primer from the vector. Restriction maps and partial sequences may be generated to identify one or more overlapping clones. The complete sequence may then be determined using standard techniques, which may involve generating a series of deletion clones. The resulting overlapping sequences are then assembled into a single contiguous sequence. A full length cDNA molecule can be generated by ligating suitable fragments, using well known techniques.

Alternatively, there are numerous amplification techniques for obtaining a full length coding sequence from a partial cDNA sequence. Within such techniques, amplification is generally performed via PCR. Any of a variety of commercially available kits may be used to perform the amplification step. Primers may be designed using, for example, software well known in the art. Primers are preferably 22-30 nucleotides in length, have a GC content of at least 50% and anneal to the target sequence at temperatures of about 68°C to 72°C. The amplified region may be sequenced as described above, and overlapping sequences assembled into a contiguous sequence.



One such amplification technique is inverse PCR (see Triglia et al., *Nucl. Acids Res.* 16:8186, 1988), which uses restriction enzymes to generate a fragment in the known region of the gene. The fragment is then circularized by intramolecular ligation and used as a template for PCR with divergent primers derived from the known region. Within an alternative approach, sequences adjacent to a partial sequence may be retrieved by amplification with a primer to a linker sequence and a primer specific to a known region. The amplified sequences are typically subjected to a second round of amplification with the same linker primer and a second primer specific to the known region. A variation on this procedure, which employs two primers that initiate extension in opposite directions from the known sequence, is described in WO 96/38591. Another such technique is known as "rapid amplification of cDNA ends" or RACE. This technique involves the use of an internal primer and an external primer, which hybridizes to a polyA region or vector sequence, to identify sequences that are 5' and 3' of a known sequence. Additional techniques include capture PCR (Lagerstrom et al., *PCR Methods Applic.* 1:111-19, 1991) and walking PCR (Parker et al., *Nucl. Acids Res.* 19:3055-60, 1991). Other methods employing amplification may also be employed to obtain a full length cDNA sequence.

In certain instances, it is possible to obtain a full length cDNA sequence by analysis of sequences provided in an expressed sequence tag (EST) database, such as that available from GenBank. Searches for overlapping ESTs may generally be performed using well known programs (e.g., NCBI BLAST searches), and such ESTs may be used to generate a contiguous full length sequence.

Certain nucleic acid sequences of cDNA molecules encoding at least a portion of a prostate tumor protein are provided in SEQ ID NOs:1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375, 381, 382 or 384-472. Isolation of these polynucleotides is described below. Each of these prostate tumor proteins was overexpressed in prostate tumor tissue.

Polynucleotide variants may generally be prepared by any method known in the art, including chemical synthesis by, for example, solid phase phosphoramidite chemical synthesis. Modifications in a polynucleotide sequence may

also be introduced using standard mutagenesis techniques, such as oligonucleotide-directed site-specific mutagenesis (*see* Adelman et al., *DNA* 2:183, 1983). Alternatively, RNA molecules may be generated by *in vitro* or *in vivo* transcription of DNA sequences encoding a prostate tumor protein, or portion thereof, provided that the DNA is incorporated into a vector with a suitable RNA polymerase promoter (such as T7 or SP6). Certain portions may be used to prepare an encoded polypeptide, as described herein. In addition, or alternatively, a portion may be administered to a patient such that the encoded polypeptide is generated *in vivo* (*e.g.*, by transfecting antigen-presenting cells, such as dendritic cells, with a cDNA construct encoding a prostate tumor polypeptide, and administering the transfected cells to the patient).

A portion of a sequence complementary to a coding sequence (*i.e.*, an antisense polynucleotide) may also be used as a probe or to modulate gene expression. cDNA constructs that can be transcribed into antisense RNA may also be introduced into cells of tissues to facilitate the production of antisense RNA. An antisense polynucleotide may be used, as described herein, to inhibit expression of a tumor protein. Antisense technology can be used to control gene expression through triple-helix formation, which compromises the ability of the double helix to open sufficiently for the binding of polymerases, transcription factors or regulatory molecules (*see* Gee et al., *In* Huber and Carr, *Molecular and Immunologic Approaches*, Futura Publishing Co. (Mt. Kisco, NY; 1994)). Alternatively, an antisense molecule may be designed to hybridize with a control region of a gene (*e.g.*, promoter, enhancer or transcription initiation site), and block transcription of the gene; or to block translation by inhibiting binding of a transcript to ribosomes.

A portion of a coding sequence, or of a complementary sequence, may also be designed as a probe or primer to detect gene expression. Probes may be labeled with a variety of reporter groups, such as radionuclides and enzymes, and are preferably at least 10 nucleotides in length, more preferably at least 20 nucleotides in length and still more preferably at least 30 nucleotides in length. Primers, as noted above, are preferably 22-30 nucleotides in length.

Any polynucleotide may be further modified to increase stability *in vivo*. Possible modifications include, but are not limited to, the addition of flanking sequences at the 5' and/or 3' ends; the use of phosphorothioate or 2' O-methyl rather than phosphodiesterase linkages in the backbone; and/or the inclusion of nontraditional bases such as inosine, queosine and wybutosine, as well as acetyl- methyl-, thio- and other modified forms of adenine, cytidine, guanine, thymine and uridine.

Nucleotide sequences as described herein may be joined to a variety of other nucleotide sequences using established recombinant DNA techniques. For example, a polynucleotide may be cloned into any of a variety of cloning vectors, including plasmids, phagemids, lambda phage derivatives and cosmids. Vectors of particular interest include expression vectors, replication vectors, probe generation vectors and sequencing vectors. In general, a vector will contain an origin of replication functional in at least one organism, convenient restriction endonuclease sites and one or more selectable markers. Other elements will depend upon the desired use, and will be apparent to those of ordinary skill in the art.

Within certain embodiments, polynucleotides may be formulated so as to permit entry into a cell of a mammal, and expression therein. Such formulations are particularly useful for therapeutic purposes, as described below. Those of ordinary skill in the art will appreciate that there are many ways to achieve expression of a polynucleotide in a target cell, and any suitable method may be employed. For example, a polynucleotide may be incorporated into a viral vector such as, but not limited to, adenovirus, adeno-associated virus, retrovirus, or vaccinia or other pox virus (e.g., avian pox virus). Techniques for incorporating DNA into such vectors are well known to those of ordinary skill in the art. A retroviral vector may additionally transfer or incorporate a gene for a selectable marker (to aid in the identification or selection of transduced cells) and/or a targeting moiety, such as a gene that encodes a ligand for a receptor on a specific target cell, to render the vector target specific. Targeting may also be accomplished using an antibody, by methods known to those of ordinary skill in the art.

Other formulations for therapeutic purposes include colloidal dispersion systems, such as macromolecule complexes, nanocapsules, microspheres, beads, and lipid-based systems including oil-in-water emulsions, micelles, mixed micelles, and liposomes. A preferred colloidal system for use as a delivery vehicle *in vitro* and *in vivo* is a liposome (*i.e.*, an artificial membrane vesicle). The preparation and use of such systems is well known in the art.

#### PROSTATE TUMOR POLYPEPTIDES

Within the context of the present invention, polypeptides may comprise at least an immunogenic portion of a prostate tumor protein or a variant thereof, as described herein. As noted above, a "prostate tumor protein" is a protein that is expressed by prostate tumor cells. Proteins that are prostate tumor proteins also react detectably within an immunoassay (such as an ELISA) with antisera from a patient with prostate cancer. Polypeptides as described herein may be of any length. Additional sequences derived from the native protein and/or heterologous sequences may be present, and such sequences may (but need not) possess further immunogenic or antigenic properties.

An "immunogenic portion," as used herein is a portion of a protein that is recognized (*i.e.*, specifically bound) by a B-cell and/or T-cell surface antigen receptor. Such immunogenic portions generally comprise at least 5 amino acid residues, more preferably at least 10, and still more preferably at least 20 amino acid residues of a prostate tumor protein or a variant thereof. Certain preferred immunogenic portions include peptides in which an N-terminal leader sequence and/or transmembrane domain have been deleted. Other preferred immunogenic portions may contain a small N- and/or C-terminal deletion (*e.g.*, 1-30 amino acids, preferably 5-15 amino acids), relative to the mature protein.

Immunogenic portions may generally be identified using well known techniques, such as those summarized in Paul, *Fundamental Immunology*, 3rd ed., 243-247 (Raven Press, 1993) and references cited therein. Such techniques include screening polypeptides for the ability to react with antigen-specific antibodies, antisera

and/or T-cell lines or clones. As used herein, antisera and antibodies are "antigen-specific" if they specifically bind to an antigen (*i.e.*, they react with the protein in an ELISA or other immunoassay, and do not react detectably with unrelated proteins). Such antisera and antibodies may be prepared as described herein, and using well known techniques. An immunogenic portion of a native prostate tumor protein is a portion that reacts with such antisera and/or T-cells at a level that is not substantially less than the reactivity of the full length polypeptide (*e.g.*, in an ELISA and/or T-cell reactivity assay). Such immunogenic portions may react within such assays at a level that is similar to or greater than the reactivity of the full length polypeptide. Such screens may generally be performed using methods well known to those of ordinary skill in the art, such as those described in Harlow and Lane, *Antibodies: A Laboratory Manual*, Cold Spring Harbor Laboratory, 1988. For example, a polypeptide may be immobilized on a solid support and contacted with patient sera to allow binding of antibodies within the sera to the immobilized polypeptide. Unbound sera may then be removed and bound antibodies detected using, for example, <sup>125</sup>I-labeled Protein A.

As noted above, a composition may comprise a variant of a native prostate tumor protein. A polypeptide "variant," as used herein, is a polypeptide that differs from a native prostate tumor protein in one or more substitutions, deletions, additions and/or insertions, such that the immunogenicity of the polypeptide is not substantially diminished. In other words, the ability of a variant to react with antigen-specific antisera may be enhanced or unchanged, relative to the native protein, or may be diminished by less than 50%, and preferably less than 20%, relative to the native protein. Such variants may generally be identified by modifying one of the above polypeptide sequences and evaluating the reactivity of the modified polypeptide with antigen-specific antibodies or antisera as described herein. Preferred variants include those in which one or more portions, such as an N-terminal leader sequence or transmembrane domain, have been removed. Other preferred variants include variants in which a small portion (*e.g.*, 1-30 amino acids, preferably 5-15 amino acids) has been removed from the N- and/or C-terminal of the mature protein. Polypeptide variants preferably exhibit at least about 70%, more preferably at least about 90% and most

preferably at least about 95% identity (determined as described above) to the identified polypeptides.

Preferably, a variant contains conservative substitutions. A "conservative substitution" is one in which an amino acid is substituted for another amino acid that has similar properties, such that one skilled in the art of peptide chemistry would expect the secondary structure and hydropathic nature of the polypeptide to be substantially unchanged. Amino acid substitutions may generally be made on the basis of similarity in polarity, charge, solubility, hydrophobicity, hydrophilicity and/or the amphipathic nature of the residues. For example, negatively charged amino acids include aspartic acid and glutamic acid; positively charged amino acids include lysine and arginine; and amino acids with uncharged polar head groups having similar hydrophilicity values include leucine, isoleucine and valine; glycine and alanine; asparagine and glutamine; and serine, threonine, phenylalanine and tyrosine. Other groups of amino acids that may represent conservative changes include: (1) ala, pro, gly, glu, asp, gln, asn, ser, thr; (2) cys, ser, tyr, thr; (3) val, ile, leu, met, ala, phe; (4) lys, arg, his; and (5) phe, tyr, trp, his. A variant may also, or alternatively, contain nonconservative changes. In a preferred embodiment, variant polypeptides differ from a native sequence by substitution, deletion or addition of five amino acids or fewer. Variants may also (or alternatively) be modified by, for example, the deletion or addition of amino acids that have minimal influence on the immunogenicity, secondary structure and hydropathic nature of the polypeptide.

As noted above, polypeptides may comprise a signal (or leader) sequence at the N-terminal end of the protein which co-translationally or post-translationally directs transfer of the protein. The polypeptide may also be conjugated to a linker or other sequence for ease of synthesis, purification or identification of the polypeptide (*e.g.*, poly-His), or to enhance binding of the polypeptide to a solid support. For example, a polypeptide may be conjugated to an immunoglobulin Fc region.

Polypeptides may be prepared using any of a variety of well known techniques. Recombinant polypeptides encoded by DNA sequences as described above may be readily prepared from the DNA sequences using any of a variety of expression

vectors known to those of ordinary skill in the art. Expression may be achieved in any appropriate host cell that has been transformed or transfected with an expression vector containing a DNA molecule that encodes a recombinant polypeptide. Suitable host cells include prokaryotes, yeast and higher eukaryotic cells. Preferably, the host cells employed are *E. coli*, yeast or a mammalian cell line such as COS or CHO. Supernatants from suitable host/vector systems which secrete recombinant protein or polypeptide into culture media may be first concentrated using a commercially available filter. Following concentration, the concentrate may be applied to a suitable purification matrix such as an affinity matrix or an ion exchange resin. Finally, one or more reverse phase HPLC steps can be employed to further purify a recombinant polypeptide.

Portions and other variants having fewer than about 100 amino acids, and generally fewer than about 50 amino acids, may also be generated by synthetic means, using techniques well known to those of ordinary skill in the art. For example, such polypeptides may be synthesized using any of the commercially available solid-phase techniques, such as the Merrifield solid-phase synthesis method, where amino acids are sequentially added to a growing amino acid chain. See Merrifield, *J. Am. Chem. Soc.* 85:2149-2146, 1963. Equipment for automated synthesis of polypeptides is commercially available from suppliers such as Perkin Elmer/Applied BioSystems Division (Foster City, CA), and may be operated according to the manufacturer's instructions.

Within certain specific embodiments, a polypeptide may be a fusion protein that comprises multiple polypeptides as described herein, or that comprises at least one polypeptide as described herein and an unrelated sequence, such as a known tumor protein. A fusion partner may, for example, assist in providing T helper epitopes (an immunological fusion partner), preferably T helper epitopes recognized by humans, or may assist in expressing the protein (an expression enhancer) at higher yields than the native recombinant protein. Certain preferred fusion partners are both immunological and expression enhancing fusion partners. Other fusion partners may be selected so as to increase the solubility of the protein or to enable the protein to be

targeted to desired intracellular compartments. Still further fusion partners include affinity tags, which facilitate purification of the protein.

In certain embodiments, the present invention provides fusion proteins comprising a polypeptide disclosed herein together with at least one of the following known prostate antigens: prostate specific antigen (PSA); prostatic acid phosphatase (PAP); and prostate specific membrane antigen (PSMA). The protein sequences for PSMA, PAP and PSA are provided in SEQ ID NO: 473-475, respectively. In certain embodiments, the fusion proteins of the present invention comprise PSA, PAP and/or PSMA in combination with one or more of the following the inventive antigens: P501S (amino acid sequence provided in SEQ ID NO: 113); P703P (amino acid sequences provided in SEQ ID NO: 327, 329, 331); P704P (cDNA sequence provided in SEQ ID NO: 67); P712P (cDNA sequence provided in SEQ ID NO: 308); P775P (cDNA sequence provided in SEQ ID NO: 311); P776P (cDNA sequence provided in SEQ ID NO: 354); P790P (cDNA sequence provided in SEQ ID NO: 352). The amino acid sequence of a fusion protein of PSA, P703P and P501S is provided in SEQ ID NO: 476. In preferred embodiments, the inventive fusion proteins comprise one of the following combinations of antigens: PSA and P703P; PSA and P501S; PAP and P703P; PAP and P501S; PSMA and P703P; PSMA and P501S; PSA, PAP and P703P; PSA, PAP and P501S; PSA, PAP, PSMA and P703P, PSA, PAP, PSMA and P501S. One of skill in the art will appreciate that the order of polypeptides within a fusion protein can be altered without substantially changing the therapeutic, prophylactic or diagnostic properties of the fusion protein.

The fusion proteins described above are more immunogenic and will be effective in a greater number of prostate cancer patients than any of the individual components alone. The use of multiple antigens in the form of a fusion protein also lessens the likelihood of immunologic escape.

Fusion proteins may generally be prepared using standard techniques, including chemical conjugation. Preferably, a fusion protein is expressed as a recombinant protein, allowing the production of increased levels, relative to a non-fused protein, in an expression system. Briefly, DNA sequences encoding the polypeptide



components may be assembled separately, and ligated into an appropriate expression vector. The 3' end of the DNA sequence encoding one polypeptide component is ligated, with or without a peptide linker, to the 5' end of a DNA sequence encoding the second polypeptide component so that the reading frames of the sequences are in phase. This permits translation into a single fusion protein that retains the biological activity of both component polypeptides.

A peptide linker sequence may be employed to separate the first and the second polypeptide components by a distance sufficient to ensure that each polypeptide folds into its secondary and tertiary structures. Such a peptide linker sequence is incorporated into the fusion protein using standard techniques well known in the art. Suitable peptide linker sequences may be chosen based on the following factors: (1) their ability to adopt a flexible extended conformation; (2) their inability to adopt a secondary structure that could interact with functional epitopes on the first and second polypeptides; and (3) the lack of hydrophobic or charged residues that might react with the polypeptide functional epitopes. Preferred peptide linker sequences contain Gly, Asn and Ser residues. Other near neutral amino acids, such as Thr and Ala may also be used in the linker sequence. Amino acid sequences which may be usefully employed as linkers include those disclosed in Maratea et al., *Gene* 40:39-46, 1985; Murphy et al., *Proc. Natl. Acad. Sci. USA* 83:8258-8262, 1986; U.S. Patent No. 4,935,233 and U.S. Patent No. 4,751,180. The linker sequence may generally be from 1 to about 50 amino acids in length. Linker sequences are not required when the first and second polypeptides have non-essential N-terminal amino acid regions that can be used to separate the functional domains and prevent steric interference.

The ligated DNA sequences are operably linked to suitable transcriptional or translational regulatory elements. The regulatory elements responsible for expression of DNA are located only 5' to the DNA sequence encoding the first polypeptides. Similarly, stop codons required to end translation and transcription termination signals are only present 3' to the DNA sequence encoding the second polypeptide.

Fusion proteins are also provided that comprise a polypeptide of the present invention together with an unrelated immunogenic protein. Preferably the immunogenic protein is capable of eliciting a recall response. Examples of such proteins include tetanus, tuberculosis and hepatitis proteins (*see*, for example, Stoute et al. *New Engl. J. Med.*, 336:86-91, 1997).

Within preferred embodiments, an immunological fusion partner is derived from protein D, a surface protein of the gram-negative bacterium *Haemophilus influenza B* (WO 91/18926). Preferably, a protein D derivative comprises approximately the first third of the protein (*e.g.*, the first N-terminal 100-110 amino acids), and a protein D derivative may be lipidated. Within certain preferred embodiments, the first 109 residues of a Lipoprotein D fusion partner is included on the N-terminus to provide the polypeptide with additional exogenous T-cell epitopes and to increase the expression level in *E. coli* (thus functioning as an expression enhancer). The lipid tail ensures optimal presentation of the antigen to antigen presenting cells. Other fusion partners include the non-structural protein from influenzae virus, NS1 (hemagglutinin). Typically, the N-terminal 81 amino acids are used, although different fragments that include T-helper epitopes may be used.

In another embodiment, the immunological fusion partner is the protein known as LYTA, or a portion thereof (preferably a C-terminal portion). LYTA is derived from *Streptococcus pneumoniae*, which synthesizes an N-acetyl-L-alanine amidase known as amidase LYTA (encoded by the *LytA* gene; *Gene* 43:265-292, 1986). LYTA is an autolysin that specifically degrades certain bonds in the peptidoglycan backbone. The C-terminal domain of the LYTA protein is responsible for the affinity to the choline or to some choline analogues such as DEAE. This property has been exploited for the development of *E. coli* C-LYTA expressing plasmids useful for expression of fusion proteins. Purification of hybrid proteins containing the C-LYTA fragment at the amino terminus has been described (*see Biotechnology* 10:795-798, 1992). Within a preferred embodiment, a repeat portion of LYTA may be incorporated into a fusion protein. A repeat portion is found in the C-

terminal region starting at residue 178. A particularly preferred repeat portion incorporates residues 188-305.

In general, polypeptides (including fusion proteins) and polynucleotides as described herein are isolated. An "isolated" polypeptide or polynucleotide is one that is removed from its original environment. For example, a naturally-occurring protein is isolated if it is separated from some or all of the coexisting materials in the natural system. Preferably, such polypeptides are at least about 90% pure, more preferably at least about 95% pure and most preferably at least about 99% pure. A polynucleotide is considered to be isolated if, for example, it is cloned into a vector that is not a part of the natural environment.

#### BINDING AGENTS

The present invention further provides agents, such as antibodies and antigen-binding fragments thereof, that specifically bind to a prostate tumor protein. As used herein, an antibody, or antigen-binding fragment thereof, is said to "specifically bind" to a prostate tumor protein if it reacts at a detectable level (within, for example, an ELISA) with a prostate tumor protein, and does not react detectably with unrelated proteins under similar conditions. As used herein, "binding" refers to a noncovalent association between two separate molecules such that a complex is formed. The ability to bind may be evaluated by, for example, determining a binding constant for the formation of the complex. The binding constant is the value obtained when the concentration of the complex is divided by the product of the component concentrations. In general, two compounds are said to "bind," in the context of the present invention, when the binding constant for complex formation exceeds about  $10^3$  L/mol. The binding constant may be determined using methods well known in the art.

Binding agents may be further capable of differentiating between patients with and without a cancer, such as prostate cancer, using the representative assays provided herein. In other words, antibodies or other binding agents that bind to a prostate tumor protein will generate a signal indicating the presence of a cancer in at least about 20% of patients with the disease, and will generate a negative signal

indicating the absence of the disease in at least about 90% of individuals without the cancer. To determine whether a binding agent satisfies this requirement, biological samples (*e.g.*, blood, sera, urine and/or tumor biopsies) from patients with and without a cancer (as determined using standard clinical tests) may be assayed as described herein for the presence of polypeptides that bind to the binding agent. It will be apparent that a statistically significant number of samples with and without the disease should be assayed. Each binding agent should satisfy the above criteria; however, those of ordinary skill in the art will recognize that binding agents may be used in combination to improve sensitivity.

Any agent that satisfies the above requirements may be a binding agent. For example, a binding agent may be a ribosome, with or without a peptide component, an RNA molecule or a polypeptide. In a preferred embodiment, a binding agent is an antibody or an antigen-binding fragment thereof. Antibodies may be prepared by any of a variety of techniques known to those of ordinary skill in the art. *See, e.g.*, Harlow and Lane, *Antibodies: A Laboratory Manual*, Cold Spring Harbor Laboratory, 1988. In general, antibodies can be produced by cell culture techniques, including the generation of monoclonal antibodies as described herein, or via transfection of antibody genes into suitable bacterial or mammalian cell hosts, in order to allow for the production of recombinant antibodies. In one technique, an immunogen comprising the polypeptide is initially injected into any of a wide variety of mammals (*e.g.*, mice, rats, rabbits, sheep or goats). In this step, the polypeptides of this invention may serve as the immunogen without modification. Alternatively, particularly for relatively short polypeptides, a superior immune response may be elicited if the polypeptide is joined to a carrier protein, such as bovine serum albumin or keyhole limpet hemocyanin. The immunogen is injected into the animal host, preferably according to a predetermined schedule incorporating one or more booster immunizations, and the animals are bled periodically. Polyclonal antibodies specific for the polypeptide may then be purified from such antisera by, for example, affinity chromatography using the polypeptide coupled to a suitable solid support.

Monoclonal antibodies specific for an antigenic polypeptide of interest may be prepared, for example, using the technique of Kohler and Milstein, *Eur. J. Immunol.* 6:511-519, 1976, and improvements thereto. Briefly, these methods involve the preparation of immortal cell lines capable of producing antibodies having the desired specificity (*i.e.*, reactivity with the polypeptide of interest). Such cell lines may be produced, for example, from spleen cells obtained from an animal immunized as described above. The spleen cells are then immortalized by, for example, fusion with a myeloma cell fusion partner, preferably one that is syngeneic with the immunized animal. A variety of fusion techniques may be employed. For example, the spleen cells and myeloma cells may be combined with a nonionic detergent for a few minutes and then plated at low density on a selective medium that supports the growth of hybrid cells, but not myeloma cells. A preferred selection technique uses HAT (hypoxanthine, aminopterin, thymidine) selection. After a sufficient time, usually about 1 to 2 weeks, colonies of hybrids are observed. Single colonies are selected and their culture supernatants tested for binding activity against the polypeptide. Hybridomas having high reactivity and specificity are preferred.

Monoclonal antibodies may be isolated from the supernatants of growing hybridoma colonies. In addition, various techniques may be employed to enhance the yield, such as injection of the hybridoma cell line into the peritoneal cavity of a suitable vertebrate host, such as a mouse. Monoclonal antibodies may then be harvested from the ascites fluid or the blood. Contaminants may be removed from the antibodies by conventional techniques, such as chromatography, gel filtration, precipitation, and extraction. The polypeptides of this invention may be used in the purification process in, for example, an affinity chromatography step.

Within certain embodiments, the use of antigen-binding fragments of antibodies may be preferred. Such fragments include Fab fragments, which may be prepared using standard techniques. Briefly, immunoglobulins may be purified from rabbit serum by affinity chromatography on Protein A bead columns (Harlow and Lane, *Antibodies: A Laboratory Manual*, Cold Spring Harbor Laboratory, 1988) and digested

by papain to yield Fab and Fc fragments. The Fab and Fc fragments may be separated by affinity chromatography on protein A bead columns.

Monoclonal antibodies of the present invention may be coupled to one or more therapeutic agents. Suitable agents in this regard include radionuclides, differentiation inducers, drugs, toxins, and derivatives thereof. Preferred radionuclides include  $^{90}\text{Y}$ ,  $^{123}\text{I}$ ,  $^{125}\text{I}$ ,  $^{131}\text{I}$ ,  $^{186}\text{Re}$ ,  $^{188}\text{Re}$ ,  $^{211}\text{At}$ , and  $^{212}\text{Bi}$ . Preferred drugs include methotrexate, and pyrimidine and purine analogs. Preferred differentiation inducers include phorbol esters and butyric acid. Preferred toxins include ricin, abrin, diphtheria toxin, cholera toxin, gelonin, *Pseudomonas* exotoxin, *Shigella* toxin, and pokeweed antiviral protein.

A therapeutic agent may be coupled (*e.g.*, covalently bonded) to a suitable monoclonal antibody either directly or indirectly (*e.g.*, via a linker group). A direct reaction between an agent and an antibody is possible when each possesses a substituent capable of reacting with the other. For example, a nucleophilic group, such as an amino or sulfhydryl group, on one may be capable of reacting with a carbonyl-containing group, such as an anhydride or an acid halide, or with an alkyl group containing a good leaving group (*e.g.*, a halide) on the other.

Alternatively, it may be desirable to couple a therapeutic agent and an antibody via a linker group. A linker group can function as a spacer to distance an antibody from an agent in order to avoid interference with binding capabilities. A linker group can also serve to increase the chemical reactivity of a substituent on an agent or an antibody, and thus increase the coupling efficiency. An increase in chemical reactivity may also facilitate the use of agents, or functional groups on agents, which otherwise would not be possible.

It will be evident to those skilled in the art that a variety of bifunctional or polyfunctional reagents, both homo- and hetero-functional (such as those described in the catalog of the Pierce Chemical Co., Rockford, IL), may be employed as the linker group. Coupling may be effected, for example, through amino groups, carboxyl groups, sulfhydryl groups or oxidized carbohydrate residues. There are numerous references describing such methodology, *e.g.*, U.S. Patent No. 4,671,958, to Rodwell et al.

Where a therapeutic agent is more potent when free from the antibody portion of the immunoconjugates of the present invention, it may be desirable to use a linker group which is cleavable during or upon internalization into a cell. A number of different cleavable linker groups have been described. The mechanisms for the intracellular release of an agent from these linker groups include cleavage by reduction of a disulfide bond (*e.g.*, U.S. Patent No. 4,489,710, to Spitler), by irradiation of a photolabile bond (*e.g.*, U.S. Patent No. 4,625,014, to Senter et al.), by hydrolysis of derivatized amino acid side chains (*e.g.*, U.S. Patent No. 4,638,045, to Kohn et al.), by serum complement-mediated hydrolysis (*e.g.*, U.S. Patent No. 4,671,958, to Rodwell et al.), and acid-catalyzed hydrolysis (*e.g.*, U.S. Patent No. 4,569,789, to Blattler et al.).

It may be desirable to couple more than one agent to an antibody. In one embodiment, multiple molecules of an agent are coupled to one antibody molecule. In another embodiment, more than one type of agent may be coupled to one antibody. Regardless of the particular embodiment, immunoconjugates with more than one agent may be prepared in a variety of ways. For example, more than one agent may be coupled directly to an antibody molecule, or linkers which provide multiple sites for attachment can be used. Alternatively, a carrier can be used.

A carrier may bear the agents in a variety of ways, including covalent bonding either directly or via a linker group. Suitable carriers include proteins such as albumins (*e.g.*, U.S. Patent No. 4,507,234, to Kato et al.), peptides and polysaccharides such as aminodextran (*e.g.*, U.S. Patent No. 4,699,784, to Shih et al.). A carrier may also bear an agent by noncovalent bonding or by encapsulation, such as within a liposome vesicle (*e.g.*, U.S. Patent Nos. 4,429,008 and 4,873,088). Carriers specific for radionuclide agents include radiohalogenated small molecules and chelating compounds. For example, U.S. Patent No. 4,735,792 discloses representative radiohalogenated small molecules and their synthesis. A radionuclide chelate may be formed from chelating compounds that include those containing nitrogen and sulfur atoms as the donor atoms for binding the metal, or metal oxide, radionuclide. For example, U.S. Patent No. 4,673,562, to Davison et al. discloses representative chelating compounds and their synthesis.

A variety of routes of administration for the antibodies and immunoconjugates may be used. Typically, administration will be intravenous, intramuscular, subcutaneous or in the bed of a resected tumor. It will be evident that the precise dose of the antibody/immunoconjugate will vary depending upon the antibody used, the antigen density on the tumor, and the rate of clearance of the antibody.

#### T CELLS

Immunotherapeutic compositions may also, or alternatively, comprise T cells specific for a prostate tumor protein. Such cells may generally be prepared *in vitro* or *ex vivo*, using standard procedures. For example, T cells may be isolated from bone marrow, peripheral blood, or a fraction of bone marrow or peripheral blood of a patient, using a commercially available cell separation system, such as the CEPRATE™ system, available from CellPro Inc., Bothell WA (*see also* U.S. Patent No. 5,240,856; U.S. Patent No. 5,215,926; WO 89/06280; WO 91/16116 and WO 92/07243). Alternatively, T cells may be derived from related or unrelated humans, non-human mammals, cell lines or cultures.

T cells may be stimulated with a prostate tumor polypeptide, polynucleotide encoding a prostate tumor polypeptide and/or an antigen presenting cell (APC) that expresses such a polypeptide. Such stimulation is performed under conditions and for a time sufficient to permit the generation of T cells that are specific for the polypeptide. Preferably, a prostate tumor polypeptide or polynucleotide is present within a delivery vehicle, such as a microsphere, to facilitate the generation of specific T cells.

T cells are considered to be specific for a prostate tumor polypeptide if the T cells kill target cells coated with the polypeptide or expressing a gene encoding the polypeptide. T cell specificity may be evaluated using any of a variety of standard techniques. For example, within a chromium release assay or proliferation assay, a stimulation index of more than two fold increase in lysis and/or proliferation, compared to negative controls, indicates T cell specificity. Such assays may be performed, for example, as described in Chen et al., *Cancer Res.* 54:1065-1070, 1994. Alternatively,



detection of the proliferation of T cells may be accomplished by a variety of known techniques. For example, T cell proliferation can be detected by measuring an increased rate of DNA synthesis (*e.g.*, by pulse-labeling cultures of T cells with tritiated thymidine and measuring the amount of tritiated thymidine incorporated into DNA). Contact with a prostate tumor polypeptide (100 ng/ml - 100 µg/ml, preferably 200 ng/ml - 25 µg/ml) for 3 - 7 days should result in at least a two fold increase in proliferation of the T cells. Contact as described above for 2-3 hours should result in activation of the T cells, as measured using standard cytokine assays in which a two fold increase in the level of cytokine release (*e.g.*, TNF or IFN-γ) is indicative of T cell activation (*see* Coligan et al., Current Protocols in Immunology, vol. 1, Wiley Interscience (Greene 1998)). T cells that have been activated in response to a prostate tumor polypeptide, polynucleotide or polypeptide-expressing APC may be CD4<sup>+</sup> and/or CD8<sup>+</sup>. Prostate tumor protein-specific T cells may be expanded using standard techniques. Within preferred embodiments, the T cells are derived from either a patient or a related, or unrelated, donor and are administered to the patient following stimulation and expansion.

For therapeutic purposes, CD4<sup>+</sup> or CD8<sup>+</sup> T cells that proliferate in response to a prostate tumor polypeptide, polynucleotide or APC can be expanded in number either *in vitro* or *in vivo*. Proliferation of such T cells *in vitro* may be accomplished in a variety of ways. For example, the T cells can be re-exposed to a prostate tumor polypeptide, or a short peptide corresponding to an immunogenic portion of such a polypeptide, with or without the addition of T cell growth factors, such as interleukin-2, and/or stimulator cells that synthesize a prostate tumor polypeptide. Alternatively, one or more T cells that proliferate in the presence of a prostate tumor protein can be expanded in number by cloning. Methods for cloning cells are well known in the art, and include limiting dilution.

#### PHARMACEUTICAL COMPOSITIONS AND VACCINES

Within certain aspects, polypeptides, polynucleotides, T cells and/or binding agents disclosed herein may be incorporated into pharmaceutical compositions

or immunogenic compositions (*i.e.*, vaccines). Pharmaceutical compositions comprise one or more such compounds and a physiologically acceptable carrier. Vaccines may comprise one or more such compounds and a non-specific immune response enhancer. A non-specific immune response enhancer may be any substance that enhances an immune response to an exogenous antigen. Examples of non-specific immune response enhancers include adjuvants, biodegradable microspheres (*e.g.*, polylactic galactide) and liposomes (into which the compound is incorporated; *see e.g.*, Fullerton, U.S. Patent No. 4,235,877). Vaccine preparation is generally described in, for example, M.F. Powell and M.J. Newman, eds., "Vaccine Design (the subunit and adjuvant approach)," Plenum Press (NY, 1995). Pharmaceutical compositions and vaccines within the scope of the present invention may also contain other compounds, which may be biologically active or inactive. For example, one or more immunogenic portions of other tumor antigens may be present, either incorporated into a fusion polypeptide or as a separate compound, within the composition or vaccine.

A pharmaceutical composition or vaccine may contain DNA encoding one or more of the polypeptides as described above, such that the polypeptide is generated *in situ*. As noted above, the DNA may be present within any of a variety of delivery systems known to those of ordinary skill in the art, including nucleic acid expression systems, bacteria and viral expression systems. Numerous gene delivery techniques are well known in the art, such as those described by Rolland, *Crit. Rev. Therap. Drug Carrier Systems* 15:143-198, 1998, and references cited therein. Appropriate nucleic acid expression systems contain the necessary DNA sequences for expression in the patient (such as a suitable promoter and terminating signal). Bacterial delivery systems involve the administration of a bacterium (such as *Bacillus-Calmette-Guerrin*) that expresses an immunogenic portion of the polypeptide on its cell surface or secretes such an epitope. In a preferred embodiment, the DNA may be introduced using a viral expression system (*e.g.*, vaccinia or other pox virus, retrovirus, or adenovirus), which may involve the use of a non-pathogenic (defective), replication competent virus. Suitable systems are disclosed, for example, in Fisher-Hoch et al., *Proc. Natl. Acad. Sci. USA* 86:317-321, 1989; Flexner et al., *Ann. N.Y. Acad. Sci.* 569:86-103, 1989; Flexner

et al., *Vaccine* 8:17-21, 1990; U.S. Patent Nos. 4,603,112, 4,769,330, and 5,017,487; WO 89/01973; U.S. Patent No. 4,777,127; GB 2,200,651; EP 0,345,242; WO 91/02805; Berkner, *Biotechniques* 6:616-627, 1988; Rosenfeld et al., *Science* 252:431-434, 1991; Kolls et al., *Proc. Natl. Acad. Sci. USA* 91:215-219, 1994; Kass-Eisler et al., *Proc. Natl. Acad. Sci. USA* 90:11498-11502, 1993; Guzman et al., *Circulation* 88:2838-2848, 1993; and Guzman et al., *Cir. Res.* 73:1202-1207, 1993. Techniques for incorporating DNA into such expression systems are well known to those of ordinary skill in the art. The DNA may also be "naked," as described, for example, in Ulmer et al., *Science* 259:1745-1749, 1993 and reviewed by Cohen, *Science* 259:1691-1692, 1993. The uptake of naked DNA may be increased by coating the DNA onto biodegradable beads, which are efficiently transported into the cells.

While any suitable carrier known to those of ordinary skill in the art may be employed in the pharmaceutical compositions of this invention, the type of carrier will vary depending on the mode of administration. Compositions of the present invention may be formulated for any appropriate manner of administration, including for example, topical, oral, nasal, intravenous, intracranial, intraperitoneal, subcutaneous or intramuscular administration. For parenteral administration, such as subcutaneous injection, the carrier preferably comprises water, saline, alcohol, a fat, a wax or a buffer. For oral administration, any of the above carriers or a solid carrier, such as mannitol, lactose, starch, magnesium stearate, sodium saccharine, talcum, cellulose, glucose, sucrose, and magnesium carbonate, may be employed. Biodegradable microspheres (e.g., polylactate polyglycolate) may also be employed as carriers for the pharmaceutical compositions of this invention. Suitable biodegradable microspheres are disclosed, for example, in U.S. Patent Nos. 4,897,268 and 5,075,109.

Such compositions may also comprise buffers (e.g., neutral buffered saline or phosphate buffered saline), carbohydrates (e.g., glucose, mannose, sucrose or dextrans), mannitol, proteins, polypeptides or amino acids such as glycine, antioxidants, chelating agents such as EDTA or glutathione, adjuvants (e.g., aluminum hydroxide) and/or preservatives. Alternatively, compositions of the present invention may be

formulated as a lyophilizate. Compounds may also be encapsulated within liposomes using well known technology.

Any of a variety of non-specific immune response enhancers may be employed in the vaccines of this invention. For example, an adjuvant may be included. Most adjuvants contain a substance designed to protect the antigen from rapid catabolism, such as aluminum hydroxide or mineral oil, and a stimulator of immune responses, such as lipid A, *Bordetella pertussis* or *Mycobacterium tuberculosis* derived proteins. Suitable adjuvants are commercially available as, for example, Freund's Incomplete Adjuvant and Complete Adjuvant (Difco Laboratories, Detroit, MI); Merck Adjuvant 65 (Merck and Company, Inc., Rahway, NJ); aluminum salts such as aluminum hydroxide gel (alum) or aluminum phosphate; salts of calcium, iron or zinc; an insoluble suspension of acylated tyrosine; acylated sugars; cationically or anionically derivatized polysaccharides; polyphosphazenes; biodegradable microspheres; monophosphoryl lipid A and quil A. Cytokines, such as GM-CSF or interleukin-2, -7, or -12, may also be used as adjuvants.

Within the vaccines provided herein, the adjuvant composition is preferably designed to induce an immune response predominantly of the Th1 type. High levels of Th1-type cytokines (e.g., IFN- $\gamma$ , IL-2 and IL-12) tend to favor the induction of cell mediated immune responses to an administered antigen. In contrast, high levels of Th2-type cytokines (e.g., IL-4, IL-5, IL-6, IL-10 and TNF- $\beta$ ) tend to favor the induction of humoral immune responses. Following application of a vaccine as provided herein, a patient will support an immune response that includes Th1- and Th2-type responses. Within a preferred embodiment, in which a response is predominantly Th1-type, the level of Th1-type cytokines will increase to a greater extent than the level of Th2-type cytokines. The levels of these cytokines may be readily assessed using standard assays. For a review of the families of cytokines, see Mosmann and Coffman, *Ann. Rev. Immunol.* 7:145-173, 1989.

Preferred adjuvants for use in eliciting a predominantly Th1-type response include, for example, a combination of monophosphoryl lipid A, preferably 3-de-O-acylated monophosphoryl lipid A (3D-MPL), together with an aluminum salt.

MPL adjuvants are available from Ribi ImmunoChem Research Inc. (Hamilton, MT; see US Patent Nos. 4,436,727; 4,877,611; 4,866,034 and 4,912,094). CpG-containing oligonucleotides (in which the CpG dinucleotide is unmethylated) also induce a predominantly Th1 response. Such oligonucleotides are well known and are described, for example, in WO 96/02555. Another preferred adjuvant is a saponin, preferably QS21, which may be used alone or in combination with other adjuvants. For example, an enhanced system involves the combination of a monophosphoryl lipid A and saponin derivative, such as the combination of QS21 and 3D-MPL as described in WO 94/00153, or a less reactogenic composition where the QS21 is quenched with cholesterol, as described in WO 96/33739. Other preferred formulations comprises an oil-in-water emulsion and tocopherol. A particularly potent adjuvant formulation involving QS21, 3D-MPL and tocopherol in an oil-in-water emulsion is described in WO 95/17210. Any vaccine provided herein may be prepared using well known methods that result in a combination of antigen, immune response enhancer and a suitable carrier or excipient.

The compositions described herein may be administered as part of a sustained release formulation (*i.e.*, a formulation such as a capsule or sponge that effects a slow release of compound following administration). Such formulations may generally be prepared using well known technology and administered by, for example, oral, rectal or subcutaneous implantation, or by implantation at the desired target site. Sustained-release formulations may contain a polypeptide, polynucleotide or antibody dispersed in a carrier matrix and/or contained within a reservoir surrounded by a rate controlling membrane. Carriers for use within such formulations are biocompatible, and may also be biodegradable; preferably the formulation provides a relatively constant level of active component release. The amount of active compound contained within a sustained release formulation depends upon the site of implantation, the rate and expected duration of release and the nature of the condition to be treated or prevented.

Any of a variety of delivery vehicles may be employed within pharmaceutical compositions and vaccines to facilitate production of an antigen-specific

immune response that targets tumor cells. Delivery vehicles include antigen presenting cells (APCs), such as dendritic cells, macrophages, B cells, monocytes and other cells that may be engineered to be efficient APCs. Such cells may, but need not, be genetically modified to increase the capacity for presenting the antigen, to improve activation and/or maintenance of the T cell response, to have anti-tumor effects *per se* and/or to be immunologically compatible with the receiver (*i.e.*, matched HLA haplotype). APCs may generally be isolated from any of a variety of biological fluids and organs, including tumor and peritumoral tissues, and may be autologous, allogeneic, syngeneic or xenogeneic cells.

Certain preferred embodiments of the present invention use dendritic cells or progenitors thereof as antigen-presenting cells. Dendritic cells are highly potent APCs (Banchereau and Steinman, *Nature* 392:245-251, 1998) and have been shown to be effective as a physiological adjuvant for eliciting prophylactic or therapeutic antitumor immunity (*see* Timmerman and Levy, *Ann. Rev. Med.* 50:507-529, 1999). In general, dendritic cells may be identified based on their typical shape (stellate *in situ*, with marked cytoplasmic processes (dendrites) visible *in vitro*) and based on the lack of differentiation markers of B cells (CD19 and CD20), T cells (CD3), monocytes (CD14) and natural killer cells (CD56), as determined using standard assays. Dendritic cells may, of course, be engineered to express specific cell-surface receptors or ligands that are not commonly found on dendritic cells *in vivo* or *ex vivo*, and such modified dendritic cells are contemplated by the present invention. As an alternative to dendritic cells, secreted vesicles antigen-loaded dendritic cells (called exosomes) may be used within a vaccine (*see* Zitvogel et al., *Nature Med.* 4:594-600, 1998).

Dendritic cells and progenitors may be obtained from peripheral blood, bone marrow, tumor-infiltrating cells, peritumoral tissues-infiltrating cells, lymph nodes, spleen, skin, umbilical cord blood or any other suitable tissue or fluid. For example, dendritic cells may be differentiated *ex vivo* by adding a combination of cytokines such as GM-CSF, IL-4, IL-13 and/or TNF $\alpha$  to cultures of monocytes harvested from peripheral blood. Alternatively, CD34 positive cells harvested from peripheral blood, umbilical cord blood or bone marrow may be differentiated into

dendritic cells by adding to the culture medium combinations of GM-CSF, IL-3, TNF $\alpha$ , CD40 ligand, LPS, flt3 ligand and/or other compound(s) that induce maturation and proliferation of dendritic cells.

Dendritic cells are conveniently categorized as "immature" and "mature" cells, which allows a simple way to discriminate between two well characterized phenotypes. However, this nomenclature should not be construed to exclude all possible intermediate stages of differentiation. Immature dendritic cells are characterized as APC with a high capacity for antigen uptake and processing, which correlates with the high expression of Fc $\gamma$  receptor, mannose receptor and DEC-205 marker. The mature phenotype is typically characterized by a lower expression of these markers, but a high expression of cell surface molecules responsible for T cell activation such as class I and class II MHC, adhesion molecules (*e.g.*, CD54 and CD11) and costimulatory molecules (*e.g.*, CD40, CD80 and CD86).

APCs may generally be transfected with a polynucleotide encoding a prostate tumor protein (or portion or other variant thereof) such that the prostate tumor polypeptide, or an immunogenic portion thereof, is expressed on the cell surface. Such transfection may take place *ex vivo*, and a composition or vaccine comprising such transfected cells may then be used for therapeutic purposes, as described herein. Alternatively, a gene delivery vehicle that targets a dendritic or other antigen presenting cell may be administered to a patient, resulting in transfection that occurs *in vivo*. *In vivo* and *ex vivo* transfection of dendritic cells, for example, may generally be performed using any methods known in the art, such as those described in WO 97/24447, or the gene gun approach described by Mahvi et al., *Immunology and cell Biology* 75:456-460, 1997. Antigen loading of dendritic cells may be achieved by incubating dendritic cells or progenitor cells with the prostate tumor polypeptide, DNA (naked or within a plasmid vector) or RNA; or with antigen-expressing recombinant bacterium or viruses (*e.g.*, vaccinia, fowlpox, adenovirus or lentivirus vectors). Prior to loading, the polypeptide may be covalently conjugated to an immunological partner that provides T cell help (*e.g.*, a carrier molecule). Alternatively, a dendritic cell may be

pulsed with a non-conjugated immunological partner, separately or in the presence of the polypeptide.

#### CANCER THERAPY

In further aspects of the present invention, the compositions described herein may be used for immunotherapy of cancer, such as prostate cancer. Within such methods, pharmaceutical compositions and vaccines are typically administered to a patient. As used herein, a "patient" refers to any warm-blooded animal, preferably a human. A patient may or may not be afflicted with cancer. Accordingly, the above pharmaceutical compositions and vaccines may be used to prevent the development of a cancer or to treat a patient afflicted with a cancer. A cancer may be diagnosed using criteria generally accepted in the art, including the presence of a malignant tumor. Pharmaceutical compositions and vaccines may be administered either prior to or following surgical removal of primary tumors and/or treatment such as administration of radiotherapy or conventional chemotherapeutic drugs.

Within certain embodiments, immunotherapy may be active immunotherapy, in which treatment relies on the *in vivo* stimulation of the endogenous host immune system to react against tumors with the administration of immune response-modifying agents (such as polypeptides and polynucleotides disclosed herein).

Within other embodiments, immunotherapy may be passive immunotherapy, in which treatment involves the delivery of agents with established tumor-immune reactivity (such as effector cells or antibodies) that can directly or indirectly mediate antitumor effects and does not necessarily depend on an intact host immune system. Examples of effector cells include T cells as discussed above, T lymphocytes (such as CD8<sup>+</sup> cytotoxic T lymphocytes and CD4<sup>+</sup> T-helper tumor-infiltrating lymphocytes), killer cells (such as Natural Killer cells and lymphokine-activated killer cells), B cells and antigen-presenting cells (such as dendritic cells and macrophages) expressing a polypeptide provided herein. T cell receptors and antibody receptors specific for the polypeptides recited herein may be cloned, expressed and transferred into other vectors or effector cells for adoptive immunotherapy. The



polypeptides provided herein may also be used to generate antibodies or anti-idiotypic antibodies (as described above and in U.S. Patent No. 4,918,164) for passive immunotherapy.

Effector cells may generally be obtained in sufficient quantities for adoptive immunotherapy by growth *in vitro*, as described herein. Culture conditions for expanding single antigen-specific effector cells to several billion in number with retention of antigen recognition *in vivo* are well known in the art. Such *in vitro* culture conditions typically use intermittent stimulation with antigen, often in the presence of cytokines (such as IL-2) and non-dividing feeder cells. As noted above, immunoreactive polypeptides as provided herein may be used to rapidly expand antigen-specific T cell cultures in order to generate a sufficient number of cells for immunotherapy. In particular, antigen-presenting cells, such as dendritic, macrophage, monocyte, fibroblast or B cells, may be pulsed with immunoreactive polypeptides or transfected with one or more polynucleotides using standard techniques well known in the art. For example, antigen-presenting cells can be transfected with a polynucleotide having a promoter appropriate for increasing expression in a recombinant virus or other expression system. Cultured effector cells for use in therapy must be able to grow and distribute widely, and to survive long term *in vivo*. Studies have shown that cultured effector cells can be induced to grow *in vivo* and to survive long term in substantial numbers by repeated stimulation with antigen supplemented with IL-2 (*see, for example, Cheever et al., Immunological Reviews 157:177, 1997*).

Alternatively, a vector expressing a polypeptide recited herein may be introduced into antigen presenting cells taken from a patient and clonally propagated *ex vivo* for transplant back into the same patient. Transfected cells may be reintroduced into the patient using any means known in the art, preferably in sterile form by intravenous, intracavitary, intraperitoneal or intratumor administration.

Routes and frequency of administration of the therapeutic compositions disclosed herein, as well as dosage, will vary from individual to individual, and may be readily established using standard techniques. In general, the pharmaceutical compositions and vaccines may be administered by injection (*e.g., intracutaneous,*

intramuscular, intravenous or subcutaneous), intranasally (*e.g.*, by aspiration) or orally. Preferably, between 1 and 10 doses may be administered over a 52 week period. Preferably, 6 doses are administered, at intervals of 1 month, and booster vaccinations may be given periodically thereafter. Alternate protocols may be appropriate for individual patients. A suitable dose is an amount of a compound that, when administered as described above, is capable of promoting an anti-tumor immune response, and is at least 10-50% above the basal (*i.e.*, untreated) level. Such response can be monitored by measuring the anti-tumor antibodies in a patient or by vaccine-dependent generation of cytolytic effector cells capable of killing the patient's tumor cells *in vitro*. Such vaccines should also be capable of causing an immune response that leads to an improved clinical outcome (*e.g.*, more frequent remissions, complete or partial or longer disease-free survival) in vaccinated patients as compared to non-vaccinated patients. In general, for pharmaceutical compositions and vaccines comprising one or more polypeptides, the amount of each polypeptide present in a dose ranges from about 100  $\mu$ g to 5 mg per kg of host. Suitable dose sizes will vary with the size of the patient, but will typically range from about 0.1 mL to about 5 mL.

In general, an appropriate dosage and treatment regimen provides the active compound(s) in an amount sufficient to provide therapeutic and/or prophylactic benefit. Such a response can be monitored by establishing an improved clinical outcome (*e.g.*, more frequent remissions, complete or partial, or longer disease-free survival) in treated patients as compared to non-treated patients. Increases in preexisting immune responses to a prostate tumor protein generally correlate with an improved clinical outcome. Such immune responses may generally be evaluated using standard proliferation, cytotoxicity or cytokine assays, which may be performed using samples obtained from a patient before and after treatment.

#### METHODS FOR DETECTING CANCER

In general, a cancer may be detected in a patient based on the presence of one or more prostate tumor proteins and/or polynucleotides encoding such proteins in a biological sample (for example, blood, sera, urine and/or tumor biopsies) obtained from

the patient. In other words, such proteins may be used as markers to indicate the presence or absence of a cancer such as prostate cancer. In addition, such proteins may be useful for the detection of other cancers. The binding agents provided herein generally permit detection of the level of antigen that binds to the agent in the biological sample. Polynucleotide primers and probes may be used to detect the level of mRNA encoding a tumor protein, which is also indicative of the presence or absence of a cancer. In general, a prostate tumor sequence should be present at a level that is at least three fold higher in tumor tissue than in normal tissue

There are a variety of assay formats known to those of ordinary skill in the art for using a binding agent to detect polypeptide markers in a sample. *See, e.g., Harlow and Lane, Antibodies: A Laboratory Manual*, Cold Spring Harbor Laboratory, 1988. In general, the presence or absence of a cancer in a patient may be determined by (a) contacting a biological sample obtained from a patient with a binding agent; (b) detecting in the sample a level of polypeptide that binds to the binding agent; and (c) comparing the level of polypeptide with a predetermined cut-off value.

In a preferred embodiment, the assay involves the use of binding agent immobilized on a solid support to bind to and remove the polypeptide from the remainder of the sample. The bound polypeptide may then be detected using a detection reagent that contains a reporter group and specifically binds to the binding agent/polypeptide complex. Such detection reagents may comprise, for example, a binding agent that specifically binds to the polypeptide or an antibody or other agent that specifically binds to the binding agent, such as an anti-immunoglobulin, protein G, protein A or a lectin. Alternatively, a competitive assay may be utilized, in which a polypeptide is labeled with a reporter group and allowed to bind to the immobilized binding agent after incubation of the binding agent with the sample. The extent to which components of the sample inhibit the binding of the labeled polypeptide to the binding agent is indicative of the reactivity of the sample with the immobilized binding agent. Suitable polypeptides for use within such assays include full length prostate tumor proteins and portions thereof to which the binding agent binds, as described above.

The solid support may be any material known to those of ordinary skill in the art to which the tumor protein may be attached. For example, the solid support may be a test well in a microtiter plate or a nitrocellulose or other suitable membrane. Alternatively, the support may be a bead or disc, such as glass, fiberglass, latex or a plastic material such as polystyrene or polyvinylchloride. The support may also be a magnetic particle or a fiber optic sensor, such as those disclosed, for example, in U.S. Patent No. 5,359,681. The binding agent may be immobilized on the solid support using a variety of techniques known to those of skill in the art, which are amply described in the patent and scientific literature. In the context of the present invention, the term "immobilization" refers to both noncovalent association, such as adsorption, and covalent attachment (which may be a direct linkage between the agent and functional groups on the support or may be a linkage by way of a cross-linking agent). Immobilization by adsorption to a well in a microtiter plate or to a membrane is preferred. In such cases, adsorption may be achieved by contacting the binding agent, in a suitable buffer, with the solid support for a suitable amount of time. The contact time varies with temperature, but is typically between about 1 hour and about 1 day. In general, contacting a well of a plastic microtiter plate (such as polystyrene or polyvinylchloride) with an amount of binding agent ranging from about 10 ng to about 10  $\mu$ g, and preferably about 100 ng to about 1  $\mu$ g, is sufficient to immobilize an adequate amount of binding agent.

Covalent attachment of binding agent to a solid support may generally be achieved by first reacting the support with a bifunctional reagent that will react with both the support and a functional group, such as a hydroxyl or amino group, on the binding agent. For example, the binding agent may be covalently attached to supports having an appropriate polymer coating using benzoquinone or by condensation of an aldehyde group on the support with an amine and an active hydrogen on the binding partner (*see, e.g.,* Pierce Immunotechnology Catalog and Handbook, 1991, at A12-A13).

In certain embodiments, the assay is a two-antibody sandwich assay. This assay may be performed by first contacting an antibody that has been immobilized

on a solid support, commonly the well of a microtiter plate, with the sample, such that polypeptides within the sample are allowed to bind to the immobilized antibody. Unbound sample is then removed from the immobilized polypeptide-antibody complexes and a detection reagent (preferably a second antibody capable of binding to a different site on the polypeptide) containing a reporter group is added. The amount of detection reagent that remains bound to the solid support is then determined using a method appropriate for the specific reporter group.

More specifically, once the antibody is immobilized on the support as described above, the remaining protein binding sites on the support are typically blocked. Any suitable blocking agent known to those of ordinary skill in the art, such as bovine serum albumin or Tween 20™ (Sigma Chemical Co., St. Louis, MO). The immobilized antibody is then incubated with the sample, and polypeptide is allowed to bind to the antibody. The sample may be diluted with a suitable diluent, such as phosphate-buffered saline (PBS) prior to incubation. In general, an appropriate contact time (*i.e.*, incubation time) is a period of time that is sufficient to detect the presence of polypeptide within a sample obtained from an individual with prostate cancer. Preferably, the contact time is sufficient to achieve a level of binding that is at least about 95% of that achieved at equilibrium between bound and unbound polypeptide. Those of ordinary skill in the art will recognize that the time necessary to achieve equilibrium may be readily determined by assaying the level of binding that occurs over a period of time. At room temperature, an incubation time of about 30 minutes is generally sufficient.

Unbound sample may then be removed by washing the solid support with an appropriate buffer, such as PBS containing 0.1% Tween 20™. The second antibody, which contains a reporter group, may then be added to the solid support. Preferred reporter groups include those groups recited above.

The detection reagent is then incubated with the immobilized antibody-polypeptide complex for an amount of time sufficient to detect the bound polypeptide. An appropriate amount of time may generally be determined by assaying the level of binding that occurs over a period of time. Unbound detection reagent is then removed

and bound detection reagent is detected using the reporter group. The method employed for detecting the reporter group depends upon the nature of the reporter group. For radioactive groups, scintillation counting or autoradiographic methods are generally appropriate. Spectroscopic methods may be used to detect dyes, luminescent groups and fluorescent groups. Biotin may be detected using avidin, coupled to a different reporter group (commonly a radioactive or fluorescent group or an enzyme). Enzyme reporter groups may generally be detected by the addition of substrate (generally for a specific period of time), followed by spectroscopic or other analysis of the reaction products.

To determine the presence or absence of a cancer, such as prostate cancer, the signal detected from the reporter group that remains bound to the solid support is generally compared to a signal that corresponds to a predetermined cut-off value. In one preferred embodiment, the cut-off value for the detection of a cancer is the average mean signal obtained when the immobilized antibody is incubated with samples from patients without the cancer. In general, a sample generating a signal that is three standard deviations above the predetermined cut-off value is considered positive for the cancer. In an alternate preferred embodiment, the cut-off value is determined using a Receiver Operator Curve, according to the method of Sackett et al., *Clinical Epidemiology: A Basic Science for Clinical Medicine*, Little Brown and Co., 1985, p. 106-7. Briefly, in this embodiment, the cut-off value may be determined from a plot of pairs of true positive rates (*i.e.*, sensitivity) and false positive rates (100%-specificity) that correspond to each possible cut-off value for the diagnostic test result. The cut-off value on the plot that is the closest to the upper left-hand corner (*i.e.*, the value that encloses the largest area) is the most accurate cut-off value, and a sample generating a signal that is higher than the cut-off value determined by this method may be considered positive. Alternatively, the cut-off value may be shifted to the left along the plot, to minimize the false positive rate, or to the right, to minimize the false negative rate. In general, a sample generating a signal that is higher than the cut-off value determined by this method is considered positive for a cancer.

In a related embodiment, the assay is performed in a flow-through or strip test format, wherein the binding agent is immobilized on a membrane, such as nitrocellulose. In the flow-through test, polypeptides within the sample bind to the immobilized binding agent as the sample passes through the membrane. A second, labeled binding agent then binds to the binding agent-polypeptide complex as a solution containing the second binding agent flows through the membrane. The detection of bound second binding agent may then be performed as described above. In the strip test format, one end of the membrane to which binding agent is bound is immersed in a solution containing the sample. The sample migrates along the membrane through a region containing second binding agent and to the area of immobilized binding agent. Concentration of second binding agent at the area of immobilized antibody indicates the presence of a cancer. Typically, the concentration of second binding agent at that site generates a pattern, such as a line, that can be read visually. The absence of such a pattern indicates a negative result. In general, the amount of binding agent immobilized on the membrane is selected to generate a visually discernible pattern when the biological sample contains a level of polypeptide that would be sufficient to generate a positive signal in the two-antibody sandwich assay, in the format discussed above. Preferred binding agents for use in such assays are antibodies and antigen-binding fragments thereof. Preferably, the amount of antibody immobilized on the membrane ranges from about 25 ng to about 1  $\mu$ g, and more preferably from about 50 ng to about 500 ng. Such tests can typically be performed with a very small amount of biological sample.

Of course, numerous other assay protocols exist that are suitable for use with the tumor proteins or binding agents of the present invention. The above descriptions are intended to be exemplary only. For example, it will be apparent to those of ordinary skill in the art that the above protocols may be readily modified to use prostate tumor polypeptides to detect antibodies that bind to such polypeptides in a biological sample. The detection of such prostate tumor protein specific antibodies may correlate with the presence of a cancer.

A cancer may also, or alternatively, be detected based on the presence of T cells that specifically react with a prostate tumor protein in a biological sample. Within certain methods, a biological sample comprising CD4<sup>+</sup> and/or CD8<sup>+</sup> T cells isolated from a patient is incubated with a prostate tumor polypeptide, a polynucleotide encoding such a polypeptide and/or an APC that expresses at least an immunogenic portion of such a polypeptide, and the presence or absence of specific activation of the T cells is detected. Suitable biological samples include, but are not limited to, isolated T cells. For example, T cells may be isolated from a patient by routine techniques (such as by Ficoll/Hypaque density gradient centrifugation of peripheral blood lymphocytes). T cells may be incubated *in vitro* for 2-9 days (typically 4 days) at 37°C with prostate tumor polypeptide (*e.g.*, 5 - 25 µg/ml). It may be desirable to incubate another aliquot of a T cell sample in the absence of prostate tumor polypeptide to serve as a control. For CD4<sup>+</sup> T cells, activation is preferably detected by evaluating proliferation of the T cells. For CD8<sup>+</sup> T cells, activation is preferably detected by evaluating cytolytic activity. A level of proliferation that is at least two fold greater and/or a level of cytolytic activity that is at least 20% greater than in disease-free patients indicates the presence of a cancer in the patient.

As noted above, a cancer may also, or alternatively, be detected based on the level of mRNA encoding a prostate tumor protein in a biological sample. For example, at least two oligonucleotide primers may be employed in a polymerase chain reaction (PCR) based assay to amplify a portion of a prostate tumor cDNA derived from a biological sample, wherein at least one of the oligonucleotide primers is specific for (*i.e.*, hybridizes to) a polynucleotide encoding the prostate tumor protein. The amplified cDNA is then separated and detected using techniques well known in the art, such as gel electrophoresis. Similarly, oligonucleotide probes that specifically hybridize to a polynucleotide encoding a prostate tumor protein may be used in a hybridization assay to detect the presence of polynucleotide encoding the tumor protein in a biological sample.

To permit hybridization under assay conditions, oligonucleotide primers and probes should comprise an oligonucleotide sequence that has at least about 60%,



preferably at least about 75% and more preferably at least about 90%, identity to a portion of a polynucleotide encoding a prostate tumor protein that is at least 10 nucleotides, and preferably at least 20 nucleotides, in length. Preferably, oligonucleotide primers and/or probes will hybridize to a polynucleotide encoding a polypeptide disclosed herein under moderately stringent conditions, as defined above. Oligonucleotide primers and/or probes which may be usefully employed in the diagnostic methods described herein preferably are at least 10-40 nucleotides in length. In a preferred embodiment, the oligonucleotide primers comprise at least 10 contiguous nucleotides, more preferably at least 15 contiguous nucleotides, of a DNA molecule having a sequence recited in SEQ ID NO: 1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375 and 381. Techniques for both PCR based assays and hybridization assays are well known in the art (*see*, for example, Mullis et al., *Cold Spring Harbor Symp. Quant. Biol.*, 51:263, 1987; Erlich ed., *PCR Technology*, Stockton Press, NY, 1989).

One preferred assay employs RT-PCR, in which PCR is applied in conjunction with reverse transcription. Typically, RNA is extracted from a biological sample, such as biopsy tissue, and is reverse transcribed to produce cDNA molecules. PCR amplification using at least one specific primer generates a cDNA molecule, which may be separated and visualized using, for example, gel electrophoresis. Amplification may be performed on biological samples taken from a test patient and from an individual who is not afflicted with a cancer. The amplification reaction may be performed on several dilutions of cDNA spanning two orders of magnitude. A two-fold or greater increase in expression in several dilutions of the test patient sample as compared to the same dilutions of the non-cancerous sample is typically considered positive.

In another embodiment, the disclosed compositions may be used as markers for the progression of cancer. In this embodiment, assays as described above for the diagnosis of a cancer may be performed over time, and the change in the level of reactive polypeptide(s) or polynucleotide evaluated. For example, the assays may be performed every 24-72 hours for a period of 6 months to 1 year, and thereafter

performed as needed. In general, a cancer is progressing in those patients in whom the level of polypeptide or polynucleotide detected increases over time. In contrast, the cancer is not progressing when the level of reactive polypeptide or polynucleotide either remains constant or decreases with time.

Certain *in vivo* diagnostic assays may be performed directly on a tumor. One such assay involves contacting tumor cells with a binding agent. The bound binding agent may then be detected directly or indirectly via a reporter group. Such binding agents may also be used in histological applications. Alternatively, polynucleotide probes may be used within such applications.

As noted above, to improve sensitivity, multiple prostate tumor protein markers may be assayed within a given sample. It will be apparent that binding agents specific for different proteins provided herein may be combined within a single assay. Further, multiple primers or probes may be used concurrently. The selection of tumor protein markers may be based on routine experiments to determine combinations that results in optimal sensitivity. In addition, or alternatively, assays for tumor proteins provided herein may be combined with assays for other known tumor antigens.

#### DIAGNOSTIC KITS

The present invention further provides kits for use within any of the above diagnostic methods. Such kits typically comprise two or more components necessary for performing a diagnostic assay. Components may be compounds, reagents, containers and/or equipment. For example, one container within a kit may contain a monoclonal antibody or fragment thereof that specifically binds to a prostate tumor protein. Such antibodies or fragments may be provided attached to a support material, as described above. One or more additional containers may enclose elements, such as reagents or buffers, to be used in the assay. Such kits may also, or alternatively, contain a detection reagent as described above that contains a reporter group suitable for direct or indirect detection of antibody binding.

Alternatively, a kit may be designed to detect the level of mRNA encoding a prostate tumor protein in a biological sample. Such kits generally comprise

at least one oligonucleotide probe or primer, as described above, that hybridizes to a polynucleotide encoding a prostate tumor protein. Such an oligonucleotide may be used, for example, within a PCR or hybridization assay. Additional components that may be present within such kits include a second oligonucleotide and/or a diagnostic reagent or container to facilitate the detection of a polynucleotide encoding a prostate tumor protein.

The following Examples are offered by way of illustration and not by way of limitation.

## EXAMPLES

### EXAMPLE 1

#### ISOLATION AND CHARACTERIZATION OF PROSTATE TUMOR POLYPEPTIDES

This Example describes the isolation of certain prostate tumor polypeptides from a prostate tumor cDNA library.

A human prostate tumor cDNA expression library was constructed from prostate tumor poly A<sup>+</sup> RNA using a Superscript Plasmid System for cDNA Synthesis and Plasmid Cloning kit (BRL Life Technologies, Gaithersburg, MD 20897) following the manufacturer's protocol. Specifically, prostate tumor tissues were homogenized with polytron (Kinematica, Switzerland) and total RNA was extracted using Trizol reagent (BRL Life Technologies) as directed by the manufacturer. The poly A<sup>+</sup> RNA was then purified using a Qiagen oligotex spin column mRNA purification kit (Qiagen, Santa Clarita, CA 91355) according to the manufacturer's protocol. First-strand cDNA was synthesized using the NotI/Oligo-dT18 primer. Double-stranded cDNA was synthesized, ligated with EcoRI/BAXI adaptors (Invitrogen, San Diego, CA) and digested with NotI. Following size fractionation with Chroma Spin-1000 columns (Clontech, Palo Alto, CA), the cDNA was ligated into the EcoRI/NotI site of pCDNA3.1 (Invitrogen) and transformed into ElectroMax *E. coli* DH10B cells (BRL Life Technologies) by electroporation.

Using the same procedure, a normal human pancreas cDNA expression library was prepared from a pool of six tissue specimens (Clontech). The cDNA libraries were characterized by determining the number of independent colonies, the percentage of clones that carried insert, the average insert size and by sequence analysis. The prostate tumor library contained  $1.64 \times 10^7$  independent colonies, with 70% of clones having an insert and the average insert size being 1745 base pairs. The normal pancreas cDNA library contained  $3.3 \times 10^6$  independent colonies, with 69% of clones

having inserts and the average insert size being 1120 base pairs. For both libraries, sequence analysis showed that the majority of clones had a full length cDNA sequence and were synthesized from mRNA, with minimal rRNA and mitochondrial DNA contamination.

cDNA library subtraction was performed using the above prostate tumor and normal pancreas cDNA libraries, as described by Hara *et al.* (*Blood*, 84:189-199, 1994) with some modifications. Specifically, a prostate tumor-specific subtracted cDNA library was generated as follows. Normal pancreas cDNA library (70 µg) was digested with EcoRI, NotI, and SfuI, followed by a filling-in reaction with DNA polymerase Klenow fragment. After phenol-chloroform extraction and ethanol precipitation, the DNA was dissolved in 100 µl of H<sub>2</sub>O, heat-denatured and mixed with 100 µl (100 µg) of Photoprobe biotin (Vector Laboratories, Burlingame, CA). As recommended by the manufacturer, the resulting mixture was irradiated with a 270 W sunlamp on ice for 20 minutes. Additional Photoprobe biotin (50 µl) was added and the biotinylation reaction was repeated. After extraction with butanol five times, the DNA was ethanol-precipitated and dissolved in 23 µl H<sub>2</sub>O to form the driver DNA.

To form the tracer DNA, 10 µg prostate tumor cDNA library was digested with BamHI and XhoI, phenol chloroform extracted and passed through Chroma spin-400 columns (Clontech). Following ethanol precipitation, the tracer DNA was dissolved in 5 µl H<sub>2</sub>O. Tracer DNA was mixed with 15 µl driver DNA and 20 µl of 2 x hybridization buffer (1.5 M NaCl/10 mM EDTA/50 mM HEPES pH 7.5/0.2% sodium dodecyl sulfate), overlaid with mineral oil, and heat-denatured completely. The sample was immediately transferred into a 68 °C water bath and incubated for 20 hours (long hybridization [LH]). The reaction mixture was then subjected to a streptavidin treatment followed by phenol/chloroform extraction. This process was repeated three more times. Subtracted DNA was precipitated, dissolved in 12 µl H<sub>2</sub>O, mixed with 8 µl driver DNA and 20 µl of 2 x hybridization buffer, and subjected to a hybridization at 68 °C for 2 hours (short hybridization [SH]). After removal of biotinylated double-stranded DNA, subtracted cDNA was ligated into BamHI/XhoI site of chloramphenicol resistant pBCSK<sup>+</sup> (Stratagene, La Jolla, CA 92037) and transformed into ElectroMax *E.*

*coli* DH10B cells by electroporation to generate a prostate tumor specific subtracted cDNA library (referred to as "prostate subtraction 1").

To analyze the subtracted cDNA library, plasmid DNA was prepared from 100 independent clones, randomly picked from the subtracted prostate tumor specific library and grouped based on insert size. Representative cDNA clones were further characterized by DNA sequencing with a Perkin Elmer/Applied Biosystems Division Automated Sequencer Model 373A (Foster City, CA). Six cDNA clones, hereinafter referred to as F1-13, F1-12, F1-16, H1-1, H1-9 and H1-4, were shown to be abundant in the subtracted prostate-specific cDNA library. The determined 3' and 5' cDNA sequences for F1-12 are provided in SEQ ID NO: 2 and 3, respectively, with determined 3' cDNA sequences for F1-13, F1-16, H1-1, H1-9 and H1-4 being provided in SEQ ID NO: 1 and 4-7, respectively.

The cDNA sequences for the isolated clones were compared to known sequences in the gene bank using the EMBL and GenBank databases (release 96). Four of the prostate tumor cDNA clones, F1-13, F1-16, H1-1, and H1-4, were determined to encode the following previously identified proteins: prostate specific antigen (PSA), human glandular kallikrein, human tumor expression enhanced gene, and mitochondria cytochrome C oxidase subunit II. H1-9 was found to be identical to a previously identified human autonomously replicating sequence. No significant homologies to the cDNA sequence for F1-12 were found.

Subsequent studies led to the isolation of a full-length cDNA sequence for F1-12. This sequence is provided in SEQ ID NO: 107, with the corresponding predicted amino acid sequence being provided in SEQ ID NO: 108.

To clone less abundant prostate tumor specific genes, cDNA library subtraction was performed by subtracting the prostate tumor cDNA library described above with the normal pancreas cDNA library and with the three most abundant genes in the previously subtracted prostate tumor specific cDNA library: human glandular kallikrein, prostate specific antigen (PSA), and mitochondria cytochrome C oxidase subunit II. Specifically, 1 µg each of human glandular kallikrein, PSA and mitochondria cytochrome C oxidase subunit II cDNAs in pCDNA3.1 were added to the

driver DNA and subtraction was performed as described above to provide a second subtracted cDNA library hereinafter referred to as the "subtracted prostate tumor specific cDNA library with spike".

Twenty-two cDNA clones were isolated from the subtracted prostate tumor specific cDNA library with spike. The determined 3' and 5' cDNA sequences for the clones referred to as J1-17, L1-12, N1-1862, J1-13, J1-19, J1-25, J1-24, K1-58, K1-63, L1-4 and L1-14 are provided in SEQ ID NOS: 8-9, 10-11, 12-13, 14-15, 16-17, 18-19, 20-21, 22-23, 24-25, 26-27 and 28-29, respectively. The determined 3' cDNA sequences for the clones referred to as J1-12, J1-16, J1-21, K1-48, K1-55, L1-2, L1-6, N1-1858, N1-1860, N1-1861, N1-1864 are provided in SEQ ID NOS: 30-40, respectively. Comparison of these sequences with those in the gene bank as described above, revealed no significant homologies to three of the five most abundant DNA species, (J1-17, L1-12 and N1-1862; SEQ ID NOS: 8-9, 10-11 and 12-13, respectively). Of the remaining two most abundant species, one (J1-12; SEQ ID NO:30) was found to be identical to the previously identified human pulmonary surfactant-associated protein, and the other (K1-48; SEQ ID NO:33) was determined to have some homology to *R. norvegicus* mRNA for 2-arylpropionyl-CoA epimerase. Of the 17 less abundant cDNA clones isolated from the subtracted prostate tumor specific cDNA library with spike, four (J1-16, K1-55, L1-6 and N1-1864; SEQ ID NOS:31, 34, 36 and 40, respectively) were found to be identical to previously identified sequences, two (J1-21 and N1-1860; SEQ ID NOS: 32 and 38, respectively) were found to show some homology to non-human sequences, and two (L1-2 and N1-1861; SEQ ID NOS: 35 and 39, respectively) were found to show some homology to known human sequences. No significant homologies were found to the polypeptides J1-13, J1-19, J1-24, J1-25, K1-58, K1-63, L1-4, L1-14 (SEQ ID NOS: 14-15, 16-17, 20-21, 18-19, 22-23, 24-25, 26-27, 28-29, respectively).

Subsequent studies led to the isolation of full length cDNA sequences for J1-17, L1-12 and N1-1862 (SEQ ID NOS: 109-111, respectively). The corresponding predicted amino acid sequences are provided in SEQ ID NOS: 112-114. L1-12 is also referred to as P501S.

In a further experiment, four additional clones were identified by subtracting a prostate tumor cDNA library with normal prostate cDNA prepared from a pool of three normal prostate poly A+ RNA (referred to as "prostate subtraction 2"). The determined cDNA sequences for these clones, hereinafter referred to as U1-3064, U1-3065, V1-3692 and 1A-3905, are provided in SEQ ID NO: 69-72, respectively. Comparison of the determined sequences with those in the gene bank revealed no significant homologies to U1-3065.

A second subtraction with spike (referred to as "prostate subtraction spike 2") was performed by subtracting a prostate tumor specific cDNA library with spike with normal pancreas cDNA library and further spiked with PSA, J1-17, pulmonary surfactant-associated protein, mitochondrial DNA, cytochrome c oxidase subunit II, N1-1862, autonomously replicating sequence, L1-12 and tumor expression enhanced gene. Four additional clones, hereinafter referred to as V1-3686, R1-2330, 1B-3976 and V1-3679, were isolated. The determined cDNA sequences for these clones are provided in SEQ ID NO:73-76, respectively. Comparison of these sequences with those in the gene bank revealed no significant homologies to V1-3686 and R1-2330.

Further analysis of the three prostate subtractions described above (prostate subtraction 2, subtracted prostate tumor specific cDNA library with spike, and prostate subtraction spike 2) resulted in the identification of sixteen additional clones, referred to as 1G-4736, 1G-4738, 1G-4741, 1G-4744, 1G-4734, 1H-4774, 1H-4781, 1H-4785, 1H-4787, 1H-4796, 1I-4810, 1I-4811, 1J-4876, 1K-4884 and 1K-4896. The determined cDNA sequences for these clones are provided in SEQ ID NOS: 77-92, respectively. Comparison of these sequences with those in the gene bank as described above, revealed no significant homologies to 1G-4741, 1G-4734, 1I-4807, 1J-4876 and 1K-4896 (SEQ ID NOS: 79, 81, 87, 90 and 92, respectively). Further analysis of the isolated clones led to the determination of extended cDNA sequences for 1G-4736, 1G-4738, 1G-4741, 1G-4744, 1H-4774, 1H-4781, 1H-4785, 1H-4787, 1H-4796, 1I-4807, 1J-4876, 1K-4884 and 1K-4896, provided in SEQ ID NOS: 179-188 and 191-193,



respectively, and to the determination of additional partial cDNA sequences for 1I-4810 and 1I-4811, provided in SEQ ID NOS: 189 and 190, respectively.

Additional studies with prostate subtraction spike 2 resulted in the isolation of three more clones. Their sequences were determined as described above and compared to the most recent GenBank. All three clones were found to have homology to known genes, which are Cysteine-rich protein, KIAA0242, and KIAA0280 (SEQ ID NO: 317, 319, and 320, respectively). Further analysis of these clones by Synteni microarray (Synteni, Palo Alto, CA) demonstrated that all three clones were over-expressed in most prostate tumors and prostate BPH, as well as in the majority of normal prostate tissues tested, but low expression in all other normal tissues.

An additional subtraction was performed by subtracting a normal prostate cDNA library with normal pancreas cDNA (referred to as "prostate subtraction 3"). This led to the identification of six additional clones referred to as 1G-4761, 1G-4762, 1H-4766, 1H-4770, 1H-4771 and 1H-4772 (SEQ ID NOS: 93-98). Comparison of these sequences with those in the gene bank revealed no significant homologies to 1G-4761 and 1H-4771 (SEQ ID NOS: 93 and 97, respectively). Further analysis of the isolated clones led to the determination of extended cDNA sequences for 1G-4761, 1G-4762, 1H-4766 and 1H-4772 provided in SEQ ID NOS: 194-196 and 199, respectively, and to the determination of additional partial cDNA sequences for 1H-4770 and 1H-4771, provided in SEQ ID NOS: 197 and 198, respectively.

Subtraction of a prostate tumor cDNA library, prepared from a pool of polyA+ RNA from three prostate cancer patients, with a normal pancreas cDNA library (prostate subtraction 4) led to the identification of eight clones, referred to as 1D-4297, 1D-4309, 1D-4278, 1D-4288, 1D-4283, 1D-4304, 1D-4296 and 1D-4280 (SEQ ID NOS: 99-107). These sequences were compared to those in the gene bank as described above. No significant homologies were found to 1D-4283 and 1D-4304 (SEQ ID NOS: 103 and 104, respectively). Further analysis of the isolated clones led to the determination of extended cDNA sequences for 1D-4309, 1D-4278, 1D-4288, 1D-4283, 1D-4304, 1D-4296 and 1D-4280, provided in SEQ ID NOS: 200-206, respectively.

cDNA clones isolated in prostate subtraction 1 and prostate subtraction 2, described above, were colony PCR amplified and their mRNA expression levels in prostate tumor, normal prostate and in various other normal tissues were determined using microarray technology (Synteni, Palo Alto, CA). Briefly, the PCR amplification products were dotted onto slides in an array format, with each product occupying a unique location in the array. mRNA was extracted from the tissue sample to be tested, reverse transcribed, and fluorescent-labeled cDNA probes were generated. The microarrays were probed with the labeled cDNA probes, the slides scanned and fluorescence intensity was measured. This intensity correlates with the hybridization intensity. Two clones (referred to as P509S and P510S) were found to be over-expressed in prostate tumor and normal prostate and expressed at low levels in all other normal tissues tested (liver, pancreas, skin, bone marrow, brain, breast, adrenal gland, bladder, testes, salivary gland, large intestine, kidney, ovary, lung, spinal cord, skeletal muscle and colon). The determined cDNA sequences for P509S and P510S are provided in SEQ ID NO: 223 and 224, respectively. Comparison of these sequences with those in the gene bank as described above, revealed some homology to previously identified ESTs.

Additional, studies led to the isolation of the full-length cDNA sequence for P509S. This sequence is provided in SEQ ID NO: 332, with the corresponding predicted amino acid sequence being provided in SEQ ID NO: 339.

## EXAMPLE 2

### DETERMINATION OF TISSUE SPECIFICITY OF PROSTATE TUMOR POLYPEPTIDES

Using gene specific primers, mRNA expression levels for the representative prostate tumor polypeptides F1-16, H1-1, J1-17 (also referred to as P502S), L1-12 (also referred to as P501S), F1-12 (also referred to as P504S) and N1-1862 (also referred to as P503S) were examined in a variety of normal and tumor tissues using RT-PCR.

Briefly, total RNA was extracted from a variety of normal and tumor tissues using Trizol reagent as described above. First strand synthesis was carried out using 1-2  $\mu$ g of total RNA with SuperScript II reverse transcriptase (BRL Life Technologies) at 42 °C for one hour. The cDNA was then amplified by PCR with gene-specific primers. To ensure the semi-quantitative nature of the RT-PCR,  $\beta$ -actin was used as an internal control for each of the tissues examined. First, serial dilutions of the first strand cDNAs were prepared and RT-PCR assays were performed using  $\beta$ -actin specific primers. A dilution was then chosen that enabled the linear range amplification of the  $\beta$ -actin template and which was sensitive enough to reflect the differences in the initial copy numbers. Using these conditions, the  $\beta$ -actin levels were determined for each reverse transcription reaction from each tissue. DNA contamination was minimized by DNase treatment and by assuring a negative PCR result when using first strand cDNA that was prepared without adding reverse transcriptase.

mRNA Expression levels were examined in four different types of tumor tissue (prostate tumor from 2 patients, breast tumor from 3 patients, colon tumor, lung tumor), and sixteen different normal tissues, including prostate, colon, kidney, liver, lung, ovary, pancreas, skeletal muscle, skin, stomach, testes, bone marrow and brain. F1-16 was found to be expressed at high levels in prostate tumor tissue, colon tumor and normal prostate, and at lower levels in normal liver, skin and testes, with expression being undetectable in the other tissues examined. H1-1 was found to be expressed at high levels in prostate tumor, lung tumor, breast tumor, normal prostate, normal colon and normal brain, at much lower levels in normal lung, pancreas, skeletal muscle, skin, small intestine, bone marrow, and was not detected in the other tissues tested. J1-17 (P502S) and L1-12 (P501S) appear to be specifically over-expressed in prostate, with both genes being expressed at high levels in prostate tumor and normal prostate but at low to undetectable levels in all the other tissues examined. N1-1862 (P503S) was found to be over-expressed in 60% of prostate tumors and detectable in normal colon and kidney. The RT-PCR results thus indicate that F1-16, H1-1, J1-17 (P502S), N1-1862 (P503S) and L1-12 (P501S) are either prostate specific or are expressed at significantly elevated levels in prostate.

Further RT-PCR studies showed that F1-12 (P504S) is over-expressed in 60% of prostate tumors, detectable in normal kidney but not detectable in all other tissues tested. Similarly, R1-2330 was shown to be over-expressed in 40% of prostate tumors, detectable in normal kidney and liver, but not detectable in all other tissues tested. U1-3064 was found to be over-expressed in 60% of prostate tumors, and also expressed in breast and colon tumors, but was not detectable in normal tissues.

RT-PCR characterization of R1-2330, U1-3064 and 1D-4279 showed that these three antigens are over-expressed in prostate and/or prostate tumors.

Northern analysis with four prostate tumors, two normal prostate samples, two BPH prostates, and normal colon, kidney, liver, lung, pancreas, skeletal muscle, brain, stomach, testes, small intestine and bone marrow, showed that L1-12 (P501S) is over-expressed in prostate tumors and normal prostate, while being undetectable in other normal tissues tested. J1-17 (P502S) was detected in two prostate tumors and not in the other tissues tested. N1-1862 (P503S) was found to be over-expressed in three prostate tumors and to be expressed in normal prostate, colon and kidney, but not in other tissues tested. F1-12 (P504S) was found to be highly expressed in two prostate tumors and to be undetectable in all other tissues tested.

The microarray technology described above was used to determine the expression levels of representative antigens described herein in prostate tumor, breast tumor and the following normal tissues: prostate, liver, pancreas, skin, bone marrow, brain, breast, adrenal gland, bladder, testes, salivary gland, large intestine, kidney, ovary, lung, spinal cord, skeletal muscle and colon. L1-12 (P501S) was found to be over-expressed in normal prostate and prostate tumor, with some expression being detected in normal skeletal muscle. Both J1-12 and F1-12 (P504S) were found to be over-expressed in prostate tumor, with expression being lower or undetectable in all other tissues tested. N1-1862 (P503S) was found to be expressed at high levels in prostate tumor and normal prostate, and at low levels in normal large intestine and normal colon, with expression being undetectable in all other tissues tested. R1-2330 was found to be over-expressed in prostate tumor and normal prostate, and to be expressed at lower levels in all other tissues tested. 1D-4279 was found to be over-

expressed in prostate tumor and normal prostate, expressed at lower levels in normal spinal cord, and to be undetectable in all other tissues tested.

Further microarray analysis to specifically address the extent to which P501S (SEQ ID NO: 110) was expressed in breast tumor revealed moderate over-expression not only in breast tumor, but also in metastatic breast tumor (2/31), with negligible to low expression in normal tissues. This data suggests that P501S may be over-expressed in various breast tumors as well as in prostate tumors.

The expression levels of 32 ESTs (expressed sequence tags) described by Vasmatazis *et al.* (*Proc. Natl. Acad. Sci. USA* 95:300-304, 1998) in a variety of tumor and normal tissues were examined by microarray technology as described above. Two of these clones (referred to as P1000C and P1001C) were found to be over-expressed in prostate tumor and normal prostate, and expressed at low to undetectable levels in all other tissues tested (normal aorta, thymus, resting and activated PBMC, epithelial cells, spinal cord, adrenal gland, fetal tissues, skin, salivary gland, large intestine, bone marrow, liver, lung, dendritic cells, stomach, lymph nodes, brain, heart, small intestine, skeletal muscle, colon and kidney. The determined cDNA sequences for P1000C and P1001C are provided in SEQ ID NO: 384 and 472, respectively. The sequence of P1001C was found to show some homology to the previously isolated Human mRNA for JM27 protein. No significant homologies were found to the sequence of P1000C.

The expression of the polypeptide encoded by the full length cDNA sequence for F1-12 (also referred to as P504S; SEQ ID NO: 108) was investigated by immunohistochemical analysis. Rabbit-anti-P504S polyclonal antibodies were generated against the full length P504S protein by standard techniques. Subsequent isolation and characterization of the polyclonal antibodies were also performed by techniques well known in the art. Immunohistochemical analysis showed that the P504S polypeptide was expressed in 100% of prostate carcinoma samples tested (n=5).

The rabbit-anti-P504S polyclonal antibody did not appear to label benign prostate cells with the same cytoplasmic granular staining, but rather with light nuclear staining. Analysis of normal tissues revealed that the encoded polypeptide was found to be expressed in some, but not all normal human tissues. Positive

cytoplasmic staining with rabbit-anti-P504S polyclonal antibody was found in normal human kidney, liver, brain, colon and lung-associated macrophages, whereas heart and bone marrow were negative.

This data indicates that the P504S polypeptide is present in prostate cancer tissues, and that there are qualitative and quantitative differences in the staining between benign prostatic hyperplasia tissues and prostate cancer tissues, suggesting that this polypeptide may be detected selectively in prostate tumors and therefore be useful in the diagnosis of prostate cancer.

### EXAMPLE 3

#### ISOLATION AND CHARACTERIZATION OF PROSTATE TUMOR POLYPEPTIDES BY PCR-BASED SUBTRACTION

A cDNA subtraction library, containing cDNA from normal prostate subtracted with ten other normal tissue cDNAs (brain, heart, kidney, liver, lung, ovary, placenta, skeletal muscle, spleen and thymus) and then submitted to a first round of PCR amplification, was purchased from Clontech. This library was subjected to a second round of PCR amplification, following the manufacturer's protocol. The resulting cDNA fragments were subcloned into the vector pT7 Blue T-vector (Novagen, Madison, WI) and transformed into XL-1 Blue MRF' *E. coli* (Stratagene). DNA was isolated from independent clones and sequenced using a Perkin Elmer/Applied Biosystems Division Automated Sequencer Model 373A.

Fifty-nine positive clones were sequenced. Comparison of the DNA sequences of these clones with those in the gene bank, as described above, revealed no significant homologies to 25 of these clones, hereinafter referred to as P5, P8, P9, P18, P20, P30, P34, P36, P38, P39, P42, P49, P50, P53, P55, P60, P64, P65, P73, P75, P76, P79 and P84. The determined cDNA sequences for these clones are provided in SEQ ID NO: 41-45, 47-52 and 54-65, respectively. P29, P47, P68, P80 and P82 (SEQ ID NO: 46, 53 and 66-68, respectively) were found to show some degree of homology to

previously identified DNA sequences. To the best of the inventors' knowledge, none of these sequences have been previously shown to be present in prostate.

Further studies using the PCR-based methodology described above resulted in the isolation of more than 180 additional clones, of which 23 clones were found to show no significant homologies to known sequences. The determined cDNA sequences for these clones are provided in SEQ ID NO: 115-123, 127, 131, 137, 145, 147-151, 153, 156-158 and 160. Twenty-three clones (SEQ ID NO: 124-126, 128-130, 132-136, 138-144, 146, 152, 154, 155 and 159) were found to show some homology to previously identified ESTs. An additional ten clones (SEQ ID NO: 161-170) were found to have some degree of homology to known genes. Larger cDNA clones containing the P20 sequence represent splice variants of a gene referred to as P703P. The determined DNA sequence for the variants referred to as DE1, DE13 and DE14 are provided in SEQ ID NOS: 171, 175 and 177, respectively, with the corresponding predicted amino acid sequences being provided in SEQ ID NO: 172, 176 and 178, respectively. The determined cDNA sequence for an extended spliced form of P703 is provided in SEQ ID NO: 225. The DNA sequences for the splice variants referred to as DE2 and DE6 are provided in SEQ ID NOS: 173 and 174, respectively.

mRNA Expression levels for representative clones in tumor tissues (prostate (n=5), breast (n=2), colon and lung) normal tissues (prostate (n=5), colon, kidney, liver, lung (n=2), ovary (n=2), skeletal muscle, skin, stomach, small intestine and brain), and activated and non-activated PBMC was determined by RT-PCR as described above. Expression was examined in one sample of each tissue type unless otherwise indicated.

P9 was found to be highly expressed in normal prostate and prostate tumor compared to all normal tissues tested except for normal colon which showed comparable expression. P20, a portion of the P703P gene, was found to be highly expressed in normal prostate and prostate tumor, compared to all twelve normal tissues tested. A modest increase in expression of P20 in breast tumor (n=2), colon tumor and lung tumor was seen compared to all normal tissues except lung (1 of 2). Increased expression of P18 was found in normal prostate, prostate tumor and breast tumor

compared to other normal tissues except lung and stomach. A modest increase in expression of P5 was observed in normal prostate compared to most other normal tissues. However, some elevated expression was seen in normal lung and PBMC. Elevated expression of P5 was also observed in prostate tumors (2 of 5), breast tumor and one lung tumor sample. For P30, similar expression levels were seen in normal prostate and prostate tumor, compared to six of twelve other normal tissues tested. Increased expression was seen in breast tumors, one lung tumor sample and one colon tumor sample, and also in normal PBMC. P29 was found to be over-expressed in prostate tumor (5 of 5) and normal prostate (5 of 5) compared to the majority of normal tissues. However, substantial expression of P29 was observed in normal colon and normal lung (2 of 2). P80 was found to be over-expressed in prostate tumor (5 of 5) and normal prostate (5 of 5) compared to all other normal tissues tested, with increased expression also being seen in colon tumor.

Further studies resulted in the isolation of twelve additional clones, hereinafter referred to as 10-d8, 10-h10, 11-c8, 7-g6, 8-b5, 8-b6, 8-d4, 8-d9, 8-g3, 8-h11, 9-f12 and 9-f3. The determined DNA sequences for 10-d8, 10-h10, 11-c8, 8-d4, 8-d9, 8-h11, 9-f12 and 9-f3 are provided in SEQ ID NO: 207, 208, 209, 216, 217, 220, 221 and 222, respectively. The determined forward and reverse DNA sequences for 7-g6, 8-b5, 8-b6 and 8-g3 are provided in SEQ ID NO: 210 and 211; 212 and 213; 214 and 215; and 218 and 219, respectively. Comparison of these sequences with those in the gene bank revealed no significant homologies to the sequence of 9-f3. The clones 10-d8, 11-c8 and 8-h11 were found to show some homology to previously isolated ESTs, while 10-h10, 8-b5, 8-b6, 8-d4, 8-d9, 8-g3 and 9-f12 were found to show some homology to previously identified genes. Further characterization of 7-G6 and 8-G3 showed identity to the known genes PAP and PSA, respectively.

mRNA expression levels for these clones were determined using the micro-array technology described above. The clones 7-G6, 8-G3, 8-B5, 8-B6, 8-D4, 8-D9, 9-F3, 9-F12, 9-H3, 10-A2, 10-A4, 11-C9 and 11-F2 were found to be over-expressed in prostate tumor and normal prostate, with expression in other tissues tested being low or undetectable. Increased expression of 8-F11 was seen in prostate tumor



and normal prostate, bladder, skeletal muscle and colon. Increased expression of 10-H10 was seen in prostate tumor and normal prostate, bladder, lung, colon, brain and large intestine. Increased expression of 9-B1 was seen in prostate tumor, breast tumor, and normal prostate, salivary gland, large intestine and skin, with increased expression of 11-C8 being seen in prostate tumor, and normal prostate and large intestine.

An additional cDNA fragment derived from the PCR-based normal prostate subtraction, described above, was found to be prostate specific by both microarray technology and RT-PCR. The determined cDNA sequence of this clone (referred to as 9-A11) is provided in SEQ ID NO: 226. Comparison of this sequence with those in the public databases revealed 99% identity to the known gene HOXB13.

Further studies led to the isolation of the clones 8-C6 and 8-H7. The determined cDNA sequences for these clones are provided in SEQ ID NO: 227 and 228, respectively. These sequences were found to show some homology to previously isolated ESTs.

PCR and hybridization-based methodologies were employed to obtain longer cDNA sequences for clone P20 (also referred to as P703P), yielding three additional cDNA fragments that progressively extend the 5' end of the gene. These fragments, referred to as P703PDE5, P703P6.26, and P703PX-23 (SEQ ID NO: 326, 328 and 330, with the predicted corresponding amino acid sequences being provided in SEQ ID NO: 327, 329 and 331, respectively) contain additional 5' sequence. P703PDE5 was recovered by screening of a cDNA library (#141-26) with a portion of P703P as a probe. P703P6.26 was recovered from a mixture of three prostate tumor cDNAs and P703PX\_23 was recovered from cDNA library (#438-48). Together, the additional sequences include all of the putative mature serine protease along with part of the putative signal sequence. Further studies using a PCR-based subtraction library of a prostate tumor pool subtracted against a pool of normal tissues (referred to as JP: PCR subtraction) resulted in the isolation of thirteen additional clones, seven of which did not share any significant homology to known GenBank sequences. The determined cDNA sequences for these seven clones (P711P, P712P, novel 23, P774P, P775P, P710P and P768P) are provided in SEQ ID NO: 307-311, 313 and 315, respectively.

The remaining six clones (SEQ ID NO: 316 and 321-325) were shown to share some homology to known genes. By microarray analysis, all thirteen clones showed three or more fold over-expression in prostate tissues, including prostate tumors, BPH and normal prostate as compared to normal non-prostate tissues. Clones P711P, P712P, novel 23 and P768P showed over-expression in most prostate tumors and BPH tissues tested (n=29), and in the majority of normal prostate tissues (n=4), but background to low expression levels in all normal tissues. Clones P774P, P775P and P710P showed comparatively lower expression and expression in fewer prostate tumors and BPH samples, with negative to low expression in normal prostate.

The full-length cDNA for P711P was obtained by employing the partial sequence of SEQ ID NO: 307 to screen a prostate cDNA library. Specifically, a directionally cloned prostate cDNA library was prepared using standard techniques. One million colonies of this library were plated onto LB/Amp plates. Nylon membrane filters were used to lift these colonies, and the cDNAs which were picked up by these filters were denatured and cross-linked to the filters by UV light. The P711P cDNA fragment of SEQ ID NO: 307 was radio-labeled and used to hybridize with these filters. Positive clones were selected, and cDNAs were prepared and sequenced using an automatic Perkin Elmer/Applied Biosystems sequencer. The determined full-length sequence of P711P is provided in SEQ ID NO: 382, with the corresponding predicted amino acid sequence being provided in SEQ ID NO: 383.

Using PCR and hybridization-based methodologies, additional cDNA sequence information was derived for two clones described above, 11-C9 and 9-F3, herein after referred to as P707P and P714P, respectively (SEQ ID NO: 333 and 334). After comparison with the most recent GenBank, P707P was found to be a splice variant of the known gene HoxB13. In contrast, no significant homologies to P714P were found.

Clones 8-B3, P89, P98, P130 and P201 (as disclosed in U.S. Patent Application No. 09/020,956, filed February 9, 1998) were found to be contained within one contiguous sequence, referred to as P705P (SEQ ID NO: 335, with the predicted

amino acid sequence provided in SEQ ID NO: 336), which was determined to be a splice variant of the known gene NKX 3.1.

#### EXAMPLE 4

##### SYNTHESIS OF POLYPEPTIDES

Polypeptides may be synthesized on a Perkin Elmer/Applied Biosystems 430A peptide synthesizer using Fmoc chemistry with HPTU (O-Benzotriazole-N,N,N',N'-tetramethyluronium hexafluorophosphate) activation. A Gly-Cys-Gly sequence may be attached to the amino terminus of the peptide to provide a method of conjugation, binding to an immobilized surface, or labeling of the peptide. Cleavage of the peptides from the solid support may be carried out using the following cleavage mixture: trifluoroacetic acid:ethanedithiol:thioanisole:water:phenol (40:1:2:2:3). After cleaving for 2 hours, the peptides may be precipitated in cold methyl-t-butyl-ether. The peptide pellets may then be dissolved in water containing 0.1% trifluoroacetic acid (TFA) and lyophilized prior to purification by C18 reverse phase HPLC. A gradient of 0%-60% acetonitrile (containing 0.1% TFA) in water (containing 0.1% TFA) may be used to elute the peptides. Following lyophilization of the pure fractions, the peptides may be characterized using electrospray or other types of mass spectrometry and by amino acid analysis.

#### EXAMPLE 5

##### FURTHER ISOLATION AND CHARACTERIZATION OF PROSTATE TUMOR POLYPEPTIDES BY PCR-BASED SUBTRACTION

A cDNA library generated from prostate primary tumor mRNA as described above was subtracted with cDNA from normal prostate. The subtraction was performed using a PCR-based protocol (Clontech), which was modified to generate larger fragments. Within this protocol, tester and driver double stranded cDNA were

separately digested with five restriction enzymes that recognize six-nucleotide restriction sites (MluI, MscI, PvuII, SalI and StuI). This digestion resulted in an average cDNA size of 600 bp, rather than the average size of 300 bp that results from digestion with RsaI according to the Clontech protocol. This modification did not affect the subtraction efficiency. Two tester populations were then created with different adapters, and the driver library remained without adapters.

The tester and driver libraries were then hybridized using excess driver cDNA. In the first hybridization step, driver was separately hybridized with each of the two tester cDNA populations. This resulted in populations of (a) unhybridized tester cDNAs, (b) tester cDNAs hybridized to other tester cDNAs, (c) tester cDNAs hybridized to driver cDNAs and (d) unhybridized driver cDNAs. The two separate hybridization reactions were then combined, and rehybridized in the presence of additional denatured driver cDNA. Following this second hybridization, in addition to populations (a) through (d), a fifth population (e) was generated in which tester cDNA with one adapter hybridized to tester cDNA with the second adapter. Accordingly, the second hybridization step resulted in enrichment of differentially expressed sequences which could be used as templates for PCR amplification with adaptor-specific primers.

The ends were then filled in, and PCR amplification was performed using adaptor-specific primers. Only population (e), which contained tester cDNA that did not hybridize to driver cDNA, was amplified exponentially. A second PCR amplification step was then performed, to reduce background and further enrich differentially expressed sequences.

This PCR-based subtraction technique normalizes differentially expressed cDNAs so that rare transcripts that are overexpressed in prostate tumor tissue may be recoverable. Such transcripts would be difficult to recover by traditional subtraction methods.

In addition to genes known to be overexpressed in prostate tumor, seventy-seven further clones were identified. Sequences of these partial cDNAs are provided in SEQ ID NO: 29 to 305. Most of these clones had no significant homology to database sequences. Exceptions were JTPN23 (SEQ ID NO: 231; similarity to pig

valosin-containing protein), JPTPN30 (SEQ ID NO: 234; similarity to rat mRNA for proteasome subunit), JPTPN45 (SEQ ID NO: 243; similarity to rat *norvegicus* cytosolic NADP-dependent isocitrate dehydrogenase), JPTPN46 (SEQ ID NO: 244; similarity to human subclone H8 4 d4 DNA sequence), JP1D6 (SEQ ID NO: 265; similarity to *G. gallus* dynein light chain-A), JP8D6 (SEQ ID NO: 288; similarity to human BAC clone RG016J04), JP8F5 (SEQ ID NO: 289; similarity to human subclone H8 3 b5 DNA sequence), and JP8E9 (SEQ ID NO: 299; similarity to human Alu sequence).

Additional studies using the PCR-based subtraction library consisting of a prostate tumor pool subtracted against a normal prostate pool (referred to as PT-PN PCR subtraction) yielded three additional clones. Comparison of the cDNA sequences of these clones with the most recent release of GenBank revealed no significant homologies to the two clones referred to as P715P and P767P (SEQ ID NO: 312 and 314). The remaining clone was found to show some homology to the known gene KIAA0056 (SEQ ID NO: 318). Using microarray analysis to measure mRNA expression levels in various tissues, all three clones were found to be over-expressed in prostate tumors and BPH tissues. Specifically, clone P715P was over-expressed in most prostate tumors and BPH tissues by a factor of three or greater, with elevated expression seen in the majority of normal prostate samples and in fetal tissue, but negative to low expression in all other normal tissues. Clone P767P was over-expressed in several prostate tumors and BPH tissues, with moderate expression levels in half of the normal prostate samples, and background to low expression in all other normal tissues tested.

Further analysis, by microarray as described above, of the PT-PN PCR subtraction library and of a DNA subtraction library containing cDNA from prostate tumor subtracted with a pool of normal tissue cDNAs, led to the isolation of 27 additional clones (SEQ ID NO: 340-365 and 381) which were determined to be over-expressed in prostate tumor. The clones of SEQ ID NO: 341, 342, 345, 347, 348, 349, 351, 355-359, 361, 362 and 364 were also found to be expressed in normal prostate. Expression of all 26 clones in a variety of normal tissues was found to be low or undetectable, with the exception of P544S (SEQ ID NO: 356) which was found to be

expressed in small intestine. Of the 26 clones, 10 (SEQ ID NO: 340-349) were found to show some homology to previously identified sequences. No significant homologies were found to the clones of SEQ ID NO: 350-365.

## EXAMPLE 6

### PEPTIDE PRIMING OF MICE AND PROPAGATION OF CTL LINES

6.1. This Example illustrates the preparation of a CTL cell line specific for cells expressing the P502S gene.

Mice expressing the transgene for human HLA A2.1 (provided by Dr L. Sherman, The Scripps Research Institute, La Jolla, CA) were immunized with P2S#12 peptide (VLGWVAEL; SEQ ID NO: 306), which is derived from the P502S gene (also referred to herein as J1-17, SEQ ID NO: 8), as described by Theobald et al., *Proc. Natl. Acad. Sci. USA* 92:11993-11997, 1995 with the following modifications. Mice were immunized with 100µg of P2S#12 and 120µg of an I-A<sup>b</sup> binding peptide derived from hepatitis B Virus protein emulsified in incomplete Freund's adjuvant. Three weeks later these mice were sacrificed and using a nylon mesh single cell suspensions prepared. Cells were then resuspended at  $6 \times 10^6$  cells/ml in complete media (RPMI-1640; Gibco BRL, Gaithersburg, MD) containing 10% FCS, 2mM Glutamine (Gibco BRL), sodium pyruvate (Gibco BRL), non-essential amino acids (Gibco BRL),  $2 \times 10^{-5}$  M 2-mercaptoethanol, 50U/ml penicillin and streptomycin, and cultured in the presence of irradiated (3000 rads) P2S#12-pulsed (5mg/ml P2S#12 and 10mg/ml β2-microglobulin) LPS blasts (A2 transgenic spleens cells cultured in the presence of 7µg/ml dextran sulfate and 25µg/ml LPS for 3 days). Six days later, cells ( $5 \times 10^5$ /ml) were restimulated with  $2.5 \times 10^6$ /ml peptide pulsed irradiated (20,000 rads) EL4A2Kb cells (Sherman et al, *Science* 258:815-818, 1992) and  $3 \times 10^6$ /ml A2 transgenic spleen feeder cells. Cells were cultured in the presence of 20U/ml IL-2. Cells continued to be restimulated on a weekly basis as described, in preparation for cloning the line.

P2S#12 line was cloned by limiting dilution analysis with peptide pulsed EL4 A2Kb tumor cells ( $1 \times 10^4$  cells/ well) as stimulators and A2 transgenic spleen cells

as feeders (  $5 \times 10^5$  cells/ well) grown in the presence of 30U/ml IL-2. On day 14, cells were restimulated as before. On day 21, clones that were growing were isolated and maintained in culture. Several of these clones demonstrated significantly higher reactivity (lysis) against human fibroblasts (HLA A2.1 expressing) transduced with P502S than against control fibroblasts. An example is presented in Figure 1.

This data indicates that P2S #12 represents a naturally processed epitope of the P502S protein that is expressed in the context of the human HLA A2.1 molecule.

6.2. This Example illustrates the preparation of murine CTL lines and CTL clones specific for cells expressing the P501S gene.

This series of experiments were performed similarly to that described above. Mice were immunized with the P1S#10 peptide (SEQ ID NO: 337), which is derived from the P501S gene (also referred to herein as L1-12, SEQ ID NO: 110). The P1S#10 peptide was derived by analysis of the predicted polypeptide sequence for P501S for potential HLA-A2 binding sequences as defined by published HLA-A2 binding motifs (Parker, KC, *et al*, *J. Immunol.*, 152:163, 1994). P1S#10 peptide was synthesized as described in Example 4, and empirically tested for HLA-A2 binding using a T cell based competition assay. Predicted A2 binding peptides were tested for their ability to compete HLA-A2 specific peptide presentation to an HLA-A2 restricted CTL clone (D150M58), which is specific for the HLA-A2 binding influenza matrix peptide fluM58. D150M58 CTL secretes TNF in response to self-presentation of peptide fluM58. In the competition assay, test peptides at 100-200  $\mu\text{g/ml}$  were added to cultures of D150M58 CTL in order to bind HLA-A2 on the CTL. After thirty minutes, CTL cultured with test peptides, or control peptides, were tested for their antigen dose response to the fluM58 peptide in a standard TNF bioassay. As shown in Figure 3, peptide P1S#10 competes HLA-A2 restricted presentation of fluM58, demonstrating that peptide P1S#10 binds HLA-A2.

Mice expressing the transgene for human HLA A2.1 were immunized as described by Theobald et al. (*Proc. Natl. Acad. Sci. USA* 92:11993-11997, 1995) with the following modifications. Mice were immunized with 62.5 $\mu\text{g}$  of P1S #10 and 120 $\mu\text{g}$

of an I-A<sup>b</sup> binding peptide derived from Hepatitis B Virus protein emulsified in incomplete Freund's adjuvant. Three weeks later these mice were sacrificed and single cell suspensions prepared using a nylon mesh. Cells were then resuspended at  $6 \times 10^6$  cells/ml in complete media (as described above) and cultured in the presence of irradiated (3000 rads) P1S#10-pulsed ( $2\mu\text{g/ml}$  P1S#10 and  $10\text{mg/ml}$   $\beta 2$ -microglobulin) LPS blasts (A2 transgenic spleens cells cultured in the presence of  $7\mu\text{g/ml}$  dextran sulfate and  $25\mu\text{g/ml}$  LPS for 3 days). Six days later cells ( $5 \times 10^5/\text{ml}$ ) were restimulated with  $2.5 \times 10^6/\text{ml}$  peptide-pulsed irradiated (20,000 rads) EL4A2Kb cells, as described above, and  $3 \times 10^6/\text{ml}$  A2 transgenic spleen feeder cells. Cells were cultured in the presence of 20 U/ml IL-2. Cells were restimulated on a weekly basis in preparation for cloning. After three rounds of *in vitro* stimulations, one line was generated that recognized P1S#10-pulsed Jurkat A2Kb targets and P501S-transduced Jurkat targets as shown in Figure 4.

A P1S#10-specific CTL line was cloned by limiting dilution analysis with peptide pulsed EL4 A2Kb tumor cells ( $1 \times 10^4$  cells/ well) as stimulators and A2 transgenic spleen cells as feeders ( $5 \times 10^5$  cells/ well) grown in the presence of 30U/ml IL-2. On day 14, cells were restimulated as before. On day 21, viable clones were isolated and maintained in culture. As shown in Figure 5, five of these clones demonstrated specific cytolytic reactivity against P501S-transduced Jurkat A2Kb targets. This data indicates that P1S#10 represents a naturally processed epitope of the P501S protein that is expressed in the context of the human HLA-A2.1 molecule.

#### EXAMPLE 7

#### ABILITY OF HUMAN T CELLS TO RECOGNIZE PROSTATE TUMOR POLYPEPTIDES

This Example illustrates the ability of T cells specific for a prostate tumor polypeptide to recognize human tumor.



Human CD8<sup>+</sup> T cells were primed *in vitro* to the P2S-12 peptide (SEQ ID NO: 306) derived from P502S (also referred to as J1-17) using dendritic cells according to the protocol of Van Tsai et al. (*Critical Reviews in Immunology* 18:65-75, 1998). The resulting CD8<sup>+</sup> T cell microcultures were tested for their ability to recognize the P2S-12 peptide presented by autologous fibroblasts or fibroblasts which were transduced to express the P502S gene in a  $\gamma$ -interferon ELISPOT assay (see Lalvani et al., *J. Exp. Med.* 186:859-865, 1997). Briefly, titrating numbers of T cells were assayed in duplicate on 10<sup>4</sup> fibroblasts in the presence of 3  $\mu$ g/ml human  $\beta_2$ -microglobulin and 1  $\mu$ g/ml P2S-12 peptide or control E75 peptide. In addition, T cells were simultaneously assayed on autologous fibroblasts transduced with the P502S gene or as a control, fibroblasts transduced with HER-2/*neu*. Prior to the assay, the fibroblasts were treated with 10 ng/ml  $\gamma$ -interferon for 48 hours to upregulate class I MHC expression. One of the microcultures (#5) demonstrated strong recognition of both peptide pulsed fibroblasts as well as transduced fibroblasts in a  $\gamma$ -interferon ELISPOT assay. Figure 2A demonstrates that there was a strong increase in the number of  $\gamma$ -interferon spots with increasing numbers of T cells on fibroblasts pulsed with the P2S-12 peptide (solid bars) but not with the control E75 peptide (open bars). This shows the ability of these T cells to specifically recognize the P2S-12 peptide. As shown in Figure 2B, this microculture also demonstrated an increase in the number of  $\gamma$ -interferon spots with increasing numbers of T cells on fibroblasts transduced to express the P502S gene but not the HER-2/*neu* gene. These results provide additional confirmatory evidence that the P2S-12 peptide is a naturally processed epitope of the P502S protein. Furthermore, this also demonstrates that there exists in the human T cell repertoire, high affinity T cells which are capable of recognizing this epitope. These T cells should also be capable of recognizing human tumors which express the P502S gene.

## EXAMPLE 8

PRIMING OF CTL *IN VIVO* USING NAKED DNA IMMUNIZATION WITH A PROSTATE ANTIGEN

The prostate tumor antigen L1-12, as described above, is also referred to as P501S. HLA A2Kb Tg mice (provided by Dr L. Sherman, The Scripps Research Institute, La Jolla, CA) were immunized with 100 µg VR10132-P501S either intramuscularly or intradermally. The mice were immunized three times, with a two week interval between immunizations. Two weeks after the last immunization, immune spleen cells were cultured with Jurkat A2Kb-P501S transduced stimulator cells. CTL lines were stimulated weekly. After two weeks of *in vitro* stimulation, CTL activity was assessed against P501S transduced targets. Two out of 8 mice developed strong anti-P501S CTL responses. These results demonstrate that P501S contains at least one naturally processed A2-restricted CTL epitope.

## EXAMPLE 9

GENERATION OF HUMAN CTL *IN VITRO* USING WHOLE GENE PRIMING AND STIMULATION TECHNIQUES WITH PROSTATE TUMOR ANTIGEN

Using *in vitro* whole-gene priming with P501S-retrovirally transduced autologous fibroblasts (see, for example, Yee et al, *The Journal of Immunology*, 157(9):4079-86, 1996), human CTL lines were derived that specifically recognize autologous fibroblasts transduced with P501S (also known as L1-12), as determined by interferon-γ ELISPOT analysis as described above. Using a panel of HLA-mismatched fibroblast lines transduced with P501S, these CTL lines were shown to be restricted HLA-A2 class I allele. Specifically, dendritic cells (DC) were differentiated from monocyte cultures derived from PBMC of normal human donors by growing for five days in RPMI medium containing 10% human serum, 50 ng/ml human GM-CSF and 30 ng/ml human IL-4. Following culture, DC were infected overnight with recombinant P501S vaccinia virus at a multiplicity of infection (M.O.I) of five, and matured

overnight by the addition of 3 µg/ml CD40 ligand. Virus was inactivated by UV irradiation. CD8+ T cells were isolated using a magnetic bead system, and priming cultures were initiated using standard culture techniques. Cultures were restimulated every 7-10 days using autologous primary fibroblasts retrovirally transduced with P501S. Following four stimulation cycles, CD8+ T cell lines were identified that specifically produced interferon-γ when stimulated with P501S-transduced autologous fibroblasts. The P501S-specific activity could be sustained by the continued stimulation of the cultures with P501S-transduced fibroblasts in the presence of IL-15. A panel of HLA-mismatched fibroblast lines transduced with P501S were generated to define the restriction allele of the response. By measuring interferon-γ in an ELISPOT assay, the P501S specific response was shown to be restricted by HLA-A2. These results demonstrate that a CD8+ CTL response to P501S can be elicited.

#### EXAMPLE 10

##### IDENTIFICATION OF A NATURALLY PROCESSED CTL EPITOPE CONTAINED WITHIN A PROSTATE TUMOR ANTIGEN

The 9-mer peptide p5 (SEQ ID NO: 338) was derived from the P703P antigen (also referred to as P20). The p5 peptide is immunogenic in human HLA-A2 donors and is a naturally processed epitope. Antigen specific CD8+ T cells can be primed following repeated *in vitro* stimulations with monocytes pulsed with p5 peptide. These CTL specifically recognize p5-pulsed target cells in both ELISPOT (as described above) and chromium release assays. Additionally, immunization of HLA-A2 transgenic mice with p5 leads to the generation of CTL lines which recognize a variety of P703P transduced target cells expressing either HLA-A2Kb or HLA-A2. Specifically, HLA-A2 transgenic mice were immunized subcutaneously in the footpad with 100 µg of p5 peptide together with 140 µg of hepatitis B virus core peptide (a Th peptide) in Freund's incomplete adjuvant. Three weeks post immunization, spleen cells from immunized mice were stimulated *in vitro* with peptide-pulsed LPS blasts. CTL activity was assessed by chromium release assay five days after primary *in vitro*

stimulation. Retrovirally transduced cells expressing the control antigen P703P and HLA-A2Kb were used as targets. CTL lines that specifically recognized both p5-pulsed targets as well as P703P-expressing targets were identified.

Human *in vitro* priming experiments demonstrated that the p5 peptide is immunogenic in humans. Dendritic cells (DC) were differentiated from monocyte cultures derived from PBMC of normal human donors by culturing for five days in RPMI medium containing 10% human serum, 50 ng/ml human GM-CSF and 30 ng/ml human IL-4. Following culture, the DC were pulsed with p5 peptide and cultured with GM-CSF and IL-4 together with CD8+ T cell enriched PBMC. CTL lines were restimulated on a weekly basis with p5-pulsed monocytes. Five to six weeks after initiation of the CTL cultures, CTL recognition of p5-pulsed target cells was demonstrated.

#### EXAMPLE 11

##### EXPRESSION OF A BREAST TUMOR-DERIVED ANTIGEN IN PROSTATE

Isolation of the antigen B305D from breast tumor by differential display is described in US Patent Application No. 08/700,014, filed August 20, 1996. Several different splice forms of this antigen were isolated. The determined cDNA sequences for these splice forms are provided in SEQ ID NO: 366-375, with the predicted amino acid sequences corresponding to the sequences of SEQ ID NO: 292, 298 and 301-303 being provided in SEQ ID NO: 299-306, respectively.

The expression levels of B305D in a variety of tumor and normal tissues were examined by real time PCR and by Northern analysis. The results indicated that B305D is highly expressed in breast tumor, prostate tumor, normal prostate tumor and normal testes, with expression being low or undetectable in all other tissues examined (colon tumor, lung tumor, ovary tumor, and normal bone marrow, colon, kidney, liver, lung, ovary, skin, small intestine, stomach).

## EXAMPLE 12

### ELICITATION OF PROSTATE TUMOR ANTIGEN-SPECIFIC CTL RESPONSES IN HUMAN BLOOD

This Example illustrates the ability of a prostate tumor antigen to elicit a CTL response in blood of normal humans.

Autologous dendritic cells (DC) were differentiated from monocyte cultures derived from PBMC of normal donors by growth for five days in RPMI medium containing 10% human serum, 50 ng/ml GMCSF and 30 ng/ml IL-4. Following culture, DC were infected overnight with recombinant P501S-expressing vaccinia virus at an M.O.I. of 5 and matured for 8 hours by the addition of 2 micrograms/ml CD40 ligand. Virus was inactivated by UV irradiation, CD8<sup>+</sup> cells were isolated by positive selection using magnetic beads, and priming cultures were initiated in 24-well plates. Following five stimulation cycles, CD8<sup>+</sup> lines were identified that specifically produced interferon-gamma when stimulated with autologous P501S-transduced fibroblasts. The P501S-specific activity of cell line 3A-1 could be maintained following additional stimulation cycles on autologous B-LCL transduced with P501S. Line 3A-1 was shown to specifically recognize autologous B-LCL transduced to express P501S, but not EGFP-transduced autologous B-LCL, as measured by cytotoxicity assays (<sup>51</sup>Cr release) and interferon-gamma production (Interferon-gamma Elispot; *see above and Lalvani et al., J. Exp. Med. 186:859-865, 1997*). The results of these assays are presented in Figures 6A and 6B.

## EXAMPLE 13

### IDENTIFICATION OF PROSTATE TUMOR ANTIGENS BY MICROARRAY ANALYSIS

This Example describes the isolation of certain prostate tumor polypeptides from a prostate tumor cDNA library.

A human prostate tumor cDNA expression library as described above was screened using microarray analysis to identify clones that display at least a three fold over-expression in prostate tumor and/or normal prostate tissue, as compared to non-prostate normal tissues (not including testis). 372 clones were identified, and 319 were successfully sequenced. Table I presents a summary of these clones, which are shown in SEQ ID NOs:385-400. Of these sequences SEQ ID NOs:386, 389, 390 and 392 correspond to novel genes, and SEQ ID NOs: 393 and 396 correspond to previously identified sequences. The others (SEQ ID NOs:385, 387, 388, 391, 394, 395 and 397-400) correspond to known sequences, as shown in Table I.

Table I  
Summary of Prostate Tumor Antigens

Known Genes	Previously identified Genes	Novel Genes
T-cell gamma chain	P504S	23379 (SEQ ID NO:389)
Kallikrein	P1000C	23399 (SEQ ID NO:392)
Vector	P501S	23320 (SEQ ID NO:386)
CGI-82 protein mRNA (23319; SEQ ID NO:385)	P503S	23381 (SEQ ID NO:390)
PSA	P510S	
Ald. 6 Dehyd.	P784P	
L-idoitol-2 dehydrogenase (23376; SEQ ID NO:388)	P502S	
Ets transcription factor PDEF (22672; SEQ ID NO:398)	P706P	
hTGR (22678; SEQ ID NO:399)	19142.2, bangur.seq (22621; SEQ ID NO:396)	
KIAA0295(22685; SEQ ID NO:400)	5566.1 Wang(23404; SEQ ID NO:393)	
Prostatic Acid Phosphatase(22655; SEQ ID NO:397)	P712P	
transglutaminase (22611; SEQ ID NO:395)	P778P	
HDLBP (23508; SEQ ID NO:394)		
CGI-69 Protein(23367; SEQ ID NO:387)		
KIAA0122(23383; SEQ ID NO:391)		
TEEG		

CGI-82 showed 4.06 fold over-expression in prostate tissues as

compared to other normal tissues tested. It was over-expressed in 43% of prostate tumors, 25% normal prostate, not detected in other normal tissues tested. L-iditol-2 dehydrogenase showed 4.94 fold over-expression in prostate tissues as compared to other normal tissues tested. It was over-expressed in 90% of prostate tumors, 100% of normal prostate, and not detected in other normal tissues tested. Ets transcription factor PDEF showed 5.55 fold over-expression in prostate tissues as compared to other normal tissues tested. It was over-expressed in 47% prostate tumors, 25% normal prostate and not detected in other normal tissues tested. hTGR1 showed 9.11 fold over-expression in prostate tissues as compared to other normal tissues tested. It was over-expressed in 63% of prostate tumors and is not detected in normal tissues tested including normal prostate. KIAA0295 showed 5.59 fold over-expression in prostate tissues as compared to other normal tissues tested. It was over-expressed in 47% of prostate tumors, low to undetectable in normal tissues tested including normal prostate tissues. Prostatic acid phosphatase showed 9.14 fold over-expression in prostate tissues as compared to other normal tissues tested. It was over-expressed in 67% of prostate tumors, 50% of normal prostate, and not detected in other normal tissues tested. Transglutaminase showed 14.84 fold over-expression in prostate tissues as compared to other normal tissues tested. It was over-expressed in 30% of prostate tumors, 50% of normal prostate, and is not detected in other normal tissues tested. High density lipoprotein binding protein (HDLBP) showed 28.06 fold over-expression in prostate tissues as compared to other normal tissues tested. It was over-expressed in 97% of prostate tumors, 75% of normal prostate, and is undetectable in all other normal tissues tested. CGI-69 showed 3.56 fold over-expression in prostate tissues as compared to other normal tissues tested. It is a low abundant gene, detected in more than 90% of prostate tumors, and in 75% normal prostate tissues. The expression of this gene in normal tissues was very low. KIAA0122 showed 4.24 fold over-expression in prostate tissues as compared to other normal tissues tested. It was over-expressed in 57% of prostate tumors, it was undetectable in all normal tissues tested including normal prostate tissues. 19142.2 bangur showed 23.25 fold over-expression in prostate tissues as compared to other normal tissues tested. It was over-expressed in 97% of prostate tumors and 100% of



normal prostate. It was undetectable in other normal tissues tested. 5566.1 Wang showed 3.31 fold over-expression in prostate tissues as compared to other normal tissues tested. It was over-expressed in 97% of prostate tumors, 75% normal prostate and was also over-expressed in normal bone marrow, pancreas, and activated PBMC. Novel clone 23379 showed 4.86 fold over-expression in prostate tissues as compared to other normal tissues tested. It was detectable in 97% of prostate tumors and 75% normal prostate and is undetectable in all other normal tissues tested. Novel clone 23399 showed 4.09 fold over-expression in prostate tissues as compared to other normal tissues tested. It was over-expressed in 27% of prostate tumors and was undetectable in all normal tissues tested including normal prostate tissues. Novel clone 23320 showed 3.15 fold over-expression in prostate tissues as compared to other normal tissues tested. It was detectable in all prostate tumors and 50% of normal prostate tissues. It was also expressed in normal colon and trachea. Other normal tissues do not express this gene at high level.

#### EXAMPLE 14

##### IDENTIFICATION OF PROSTATE TUMOR ANTIGENS BY ELECTRONIC SUBTRACTION

This Example describes the use of an electronic subtraction technique to identify prostate tumor antigens.

Potential prostate-specific genes present in the GenBank human EST database were identified by electronic subtraction (similar to that described by Vasmatizis et al., *Proc. Natl. Acad. Sci. USA* 95:300-304, 1998). The sequences of EST clones (43,482) derived from various prostate libraries were obtained from the GenBank public human EST database. Each prostate EST sequence was used as a query sequence in a BLASTN (National Center for Biotechnology Information) search against the human EST database. All matches considered identical (length of matching sequence >100 base pairs, density of identical matches over this region > 70%) were grouped

(aligned) together in a cluster. Clusters containing more than 200 ESTs were discarded since they probably represented repetitive elements or highly expressed genes such as those for ribosomal proteins. If two or more clusters shared common ESTs, those clusters were grouped together into a "supercluster," resulting in 4,345 prostate superclusters.

Records for the 479 human cDNA libraries represented in the GenBank release were downloaded to create a database of these cDNA library records. These 479 cDNA libraries were grouped into three groups, Plus (normal prostate and prostate tumor libraries, and breast cell lines, in which expression was desired), Minus (libraries from other normal adult tissues, in which expression was not desirable), and Other (fetal tissue, infant tissue, tissues found only in women, non-prostate tumors and cell lines other than prostate cell lines, in which expression was considered to be irrelevant). A summary of these library groups is presented in Table II.

Table II  
Prostate cDNA Libraries and ESTs

Library	# of Libraries	# of ESTs
Plus	25	43,482
Normal	11	18,875
Tumor	11	21,769
Cell lines	3	2,838
Minus	166	
Other	287	

Each supercluster was analyzed in terms of the ESTs within the supercluster. The tissue source of each EST clone was noted and used to classify the superclusters into four groups: Type 1- EST clones found in the Plus group libraries only; no expression detected in Minus or Other group libraries; Type 2- EST clones found in the Plus and Other group libraries only; no expression detected in the Minus group; Type 3- EST clones found in the Plus, Minus and Other group libraries, but the

expression in the Plus group is higher than in either the Minus or Other groups; and Type 4- EST clones found in Plus, Minus and Other group libraries, but the expression in the Plus group is higher than the expression in the Minus group. This analysis identified 4,345 breast clusters (*see* Table III). From these clusters, 3,172 EST clones were ordered from Research Genetics, Inc., and were received as frozen glycerol stocks in 96-well plates.

Table III  
Prostate Cluster Summary

Type	# of Superclusters	# of ESTs Ordered
1	688	677
2	2899	2484
3	85	11
4	673	0
Total	4345	3172

The inserts were PCR-amplified using amino-linked PCR primers for Synteni microarray analysis. When more than one PCR product was obtained for a particular clone, that PCR product was not used for expression analysis. In total, 2,528 clones from the electronic subtraction method were analyzed by microarray analysis to identify electronic subtraction breast clones that had high tumor vs. normal tissue mRNA. Such screens were performed using a Synteni (Palo Alto, CA) microarray, according to the manufacturer's instructions (and essentially as described by Schena et al., *Proc. Natl. Acad. Sci. USA* 93:10614-10619, 1996 and Heller et al., *Proc. Natl. Acad. Sci. USA* 94:2150-2155, 1997). Within these analyses, the clones were arrayed on the chip, which was then probed with fluorescent probes generated from normal and tumor prostate cDNA, as well as various other normal tissues. The slides were scanned and the fluorescence intensity was measured.

Clones with an expression ratio greater than 3 (*i.e.*, the level in prostate tumor cDNA was at least three times the level in normal prostate cDNA) were

identified as prostate tumor-specific sequences (Table IV). The sequences of these clones are provided in SEQ ID NOs:401-453, with certain novel sequences shown in SEQ ID NOs:407, 413, 416-419, 422, 426, 427 and 450.

Table IV  
Prostate-tumor Specific Clones

SEQ ID NO.	Sequence Designation	Comments
401	22545	previously identified P1000C
402	22547	previously identified P704P
403	22548	known
404	22550	known
405	22551	PSA
406	22552	prostate secretory protein 94
407	22553	novel
408	22558	previously identified P509S
409	22562	glandular kallikrein
410	22565	previously identified P1000C
411	22567	PAP
412	22568	B1006C (breast tumor antigen)
413	22570	novel
414	22571	PSA
415	22572	previously identified P706P
416	22573	novel
417	22574	novel
418	22575	novel
419	22580	novel
420	22581	PAP
421	22582	prostatic secretory protein 94
422	22583	novel
423	22584	prostatic secretory protein 94
424	22585	prostatic secretory protein 94
425	22586	known
426	22587	novel
427	22588	novel
428	22589	PAP
429	22590	known
430	22591	PSA
431	22592	known
432	22593	Previously identified P777P

433	22594	T cell receptor gamma chain
434	22595	Previously identified P705P
435	22596	Previously identified P707P
436	22847	PAP
437	22848	known
438	22849	prostatic secretory protein 57
439	22851	PAP
440	22852	PAP
441	22853	PAP
442	22854	previously identified P509S
443	22855	previously identified P705P
444	22856	previously identified P774P
445	22857	PSA
446	23601	previously identified P777P
447	23602	PSA
448	23605	PSA
449	23606	PSA
450	23612	novel
451	23614	PSA
452	23618	previously identified P1000C
453	23622	previously identified P705P

### EXAMPLE 15

#### FURTHER IDENTIFICATION OF PROSTATE TUMOR ANTIGENS BY MICROARRAY ANALYSIS

This Example describes the isolation of additional prostate tumor polypeptides from a prostate tumor cDNA library.

A human prostate tumor cDNA expression library as described above was screened using microarray analysis to identify clones that display at least a three fold over-expression in prostate tumor and/or normal prostate tissue, as compared to non-prostate normal tissues (not including testis). 142 clones were identified and sequenced. Certain of these clones are shown in SEQ ID NOs:454-467. Of these sequences SEQ ID NOs:459-461 correspond to novel genes. The others (SEQ ID NOs:454-458 and 461-467) correspond to known sequences.

### EXAMPLE 16

#### FURTHER CHARACTERIZATION OF PROSTATE TUMOR ANTIGEN P710P

This Example describes the full length cloning of P710P.

The prostate cDNA library described above was screened with the P710P fragment described above. One million colonies were plated on LB/Ampicillin plates. Nylon membrane filters were used to lift these colonies, and the cDNAs picked up by these filters were then denatured and cross-linked to the filters by UV light. The P710P fragment was radiolabeled and used to hybridize with the filters. Positive cDNA clones were selected and their cDNAs recovered and sequenced by an automatic ABI Sequencer. Four sequences were obtained, and are presented in SEQ ID NOs:468-471.

From the foregoing, it will be appreciated that, although specific embodiments of the invention have been described herein for the purposes of illustration, various modifications may be made without deviating from the spirit and scope of the invention. Accordingly, the present invention is not limited except as by the appended claims.

## CLAIMS

1. An isolated polypeptide comprising at least an immunogenic portion of a prostate tumor protein, or a variant thereof, wherein the tumor protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(a) sequences recited in any one of SEQ ID NOs:2, 3, 8-29, 41-45, 47-52, 54-65, 70, 73-74, 79, 81, 87, 90, 92, 93, 97, 103, 104, 107, 109-111, 115-160, 171, 173-175, 177, 181, 188, 191, 193, 194, 198, 203, 204, 207, 209, 220, 222-225, 227-305, 307-315, 326, 328, 330, 332, 334, 350-365, 381, 382, 384, 386, 389, 390, 392, 393, 396, 401, 402, 407, 408, 410, 413, 415-419, 422, 426, 427, 432, 434, 435, 442-444, 446, 450, 452, 453, 459-461, 468-471 or 472;

(b) sequences that hybridize to any of the foregoing sequences under moderately stringent conditions; and

(c) complements of any of the sequence of (a) or (b).

2. An isolated polypeptide according to claim 1, wherein the polypeptide comprises an amino acid sequence that is encoded by a polynucleotide sequence recited in any one of SEQ ID NOs:2, 3, 8-29, 41-45, 47-52, 54-65, 70, 73-74, 79, 81, 87, 90, 92, 93, 97, 103, 104, 107, 109-111, 115-160, 171, 173-175, 177, 181, 188, 191, 193, 194, 198, 203, 204, 207, 209, 220, 222-225, 227-305, 307-315, 326, 328, 330, 332, 334, 350-365, 381, 382, 384, 386, 389, 390, 392, 393, 396, 401, 402, 407, 408, 410, 413, 415-419, 422, 426, 427, 432, 434, 435, 442-444, 446, 450, 452, 453, 459-461, 468-471 or 472, or a complement of any of the foregoing polynucleotide sequences.

3. An isolated polypeptide comprising a sequence recited in any one of SEQ ID NO: 108, 112, 113, 114, 172, 176, 178, 327, 329, 331, 339 and 383.

4. An isolated polynucleotide encoding at least 15 amino acid residues of a prostate tumor protein, or a variant thereof that differs in one or more

substitutions, deletions, additions and/or insertions such that the ability of the variant to react with antigen-specific antisera is not substantially diminished, wherein the tumor protein comprises an amino acid sequence that is encoded by a polynucleotide comprising a sequence recited in any one of SEQ ID NOs:2, 3, 8-29, 41-45, 47-52, 54-65, 70, 73-74, 79, 81, 87, 90, 92, 93, 97, 103, 104, 107, 109-111, 115-160, 171, 173-175, 177, 181, 188, 191, 193, 194, 198, 203, 204, 207, 209, 220, 222-225, 227-305, 307-315, 326, 328, 330, 332, 334, 350-365, 381, 382, 384, 386, 389, 390, 392, 393, 396, 401, 402, 407, 408, 410, 413, 415-419, 422, 426, 427, 432, 434, 435, 442-444, 446, 450, 452, 453, 459-461, 468-471 or 472, or a complement of any of the foregoing sequences.

5. An isolated polynucleotide encoding a prostate tumor protein, or a variant thereof, wherein the tumor protein comprises an amino acid sequence that is encoded by a polynucleotide comprising a sequence recited in any one of SEQ ID NOs:2, 3, 8-29, 41-45, 47-52, 54-65, 70, 73-74, 79, 81, 87, 90, 92, 93, 97, 103, 104, 107, 109-111, 115-160, 171, 173-175, 177, 181, 188, 191, 193, 194, 198, 203, 204, 207, 209, 220, 222-225, 227-305, 307-315, 326, 328, 330, 332, 334, 350-365, 381, 382, 384, 386, 389, 390, 392, 393, 396, 401, 402, 407, 408, 410, 413, 415-419, 422, 426, 427, 432, 434, 435, 442-444, 446, 450, 452, 453, 459-461, 468-471 or 472, or a complement of any of the foregoing sequences.

6. An isolated polynucleotide comprising a sequence recited in any one of SEQ ID NOs:2, 3, 8-29, 41-45, 47-52, 54-65, 70, 73-74, 79, 81, 87, 90, 92, 93, 97, 103, 104, 107, 109-111, 115-160, 171, 173-175, 177, 181, 188, 191, 193, 194, 198, 203, 204, 207, 209, 220, 222-225, 227-305, 307-315, 326, 328, 330, 332, 334, 350-365, 381, 382, 384, 386, 389, 390, 392, 393, 396, 401, 402, 407, 408, 410, 413, 415-419, 422, 426, 427, 432, 434, 435, 442-444, 446, 450, 452, 453, 459-461, 468-471 or 472.

7. An isolated polynucleotide comprising a sequence that hybridizes, under moderately stringent conditions, to a sequence recited in any one of



SEQ ID NOs: 2, 3, 8-29, 41-45, 47-52, 54-65, 70, 73-74, 79, 81, 87, 90, 92, 93, 97, 103, 104, 107, 109-111, 115-160, 171, 173-175, 177, 181, 188, 191, 193, 194, 198, 203, 204, 207, 209, 220, 222-225, 227-305, 307-315, 326, 328, 330, 332, 334, 350-365, 381, 382, 384, 386, 389, 390, 392, 393, 396, 401, 402, 407, 408, 410, 413, 415-419, 422, 426, 427, 432, 434, 435, 442-444, 446, 450, 452, 453, 459-461, 468-471 or 472.

8. An isolated polynucleotide complementary to a polynucleotide according to any one of claims 4-7.

9. An expression vector comprising a polynucleotide according to any one of claims 4-7.

10. A host cell transformed or transfected with an expression vector according to claim 9.

11. An expression vector comprising a polynucleotide according claim 8.

12. A host cell transformed or transfected with an expression vector according to claim 11.

13. A pharmaceutical composition comprising a polypeptide according to claim 1, in combination with a physiologically acceptable carrier.

14. A vaccine comprising a polypeptide according to claim 1, in combination with a non-specific immune response enhancer.

15. A vaccine according to claim 14, wherein the non-specific immune response enhancer is an adjuvant.

16. A vaccine according to claim 14, wherein the non-specific immune response enhancer induces a predominantly Type I response.
17. A pharmaceutical composition comprising a polynucleotide according to claim 4, in combination with a physiologically acceptable carrier.
18. A vaccine comprising a polynucleotide according to claim 4, in combination with a non-specific immune response enhancer.
19. A vaccine according to claim 18, wherein the non-specific immune response enhancer is an adjuvant.
20. A vaccine according to claim 18, wherein the non-specific immune response enhancer induces a predominantly Type I response.
21. An isolated antibody, or antigen-binding fragment thereof, that specifically binds to a prostate tumor protein that comprises an amino acid sequence that is encoded by a polynucleotide sequence recited in any one of SEQ ID NOs:2, 3, 8-29, 41-45, 47-52, 54-65, 70, 73-74, 79, 81, 87, 90, 92, 93, 97, 103, 104, 107, 109-111, 115-160, 171, 173-175, 177, 181, 188, 191, 193, 194, 198, 203, 204, 207, 209, 220, 222-225, 227-305, 307-315, 326, 328, 330, 332, 334, 350-365, 381, 382, 384, 386, 389, 390, 392, 393, 396, 401, 402, 407, 408, 410, 413, 415-419, 422, 426, 427, 432, 434, 435, 442-444, 446, 450, 452, 453, 459-461, 468-471 or 472 or a complement of any of the foregoing polynucleotide sequences.
22. A pharmaceutical composition comprising an antibody or fragment thereof according to claim 18, in combination with a physiologically acceptable carrier.

23. A pharmaceutical composition comprising an antigen-presenting cell that expresses a polypeptide according to claim 1, in combination with a pharmaceutically acceptable carrier or excipient.

24. A pharmaceutical composition according to claim 23, wherein the antigen presenting cell is a dendritic cell or a macrophage.

25. A vaccine comprising an antigen-presenting cell that expresses a polypeptide according to claim 1, in combination with a non-specific immune response enhancer.

26. A vaccine according to claim 25, wherein the non-specific immune response enhancer is an adjuvant.

27. A vaccine according to claim 25, wherein the non-specific immune response enhancer induces a predominantly Type I response.

28. A vaccine according to claim 25, wherein the antigen-presenting cell is a dendritic cell.

29. A method for inhibiting the development of a cancer in a patient, comprising administering to a patient an effective amount of a polypeptide according to claim 1, and thereby inhibiting the development of a cancer in the patient.

30. A method for inhibiting the development of a cancer in a patient, comprising administering to a patient an effective amount of a polynucleotide according to claim 4, and thereby inhibiting the development of a cancer in the patient.

31. A method for inhibiting the development of a cancer in a patient, comprising administering to a patient an effective amount of an antibody or antigen-

binding fragment thereof according to claim 21, and thereby inhibiting the development of a cancer in the patient.

32. A method for inhibiting the development of a cancer in a patient, comprising administering to a patient an effective amount of an antigen-presenting cell that expresses a polypeptide according to claim 1, and thereby inhibiting the development of a cancer in the patient.

33. A method according to claim 32, wherein the antigen-presenting cell is a dendritic cell.

34. A method according to any one of claims 29-32, wherein the cancer is prostate cancer.

35. A fusion protein comprising at least one polypeptide according to claim 1.

36. A fusion protein according to claim 35, wherein the fusion protein comprises an expression enhancer that increases expression of the fusion protein in a host cell transfected with a polynucleotide encoding the fusion protein.

37. A fusion protein according to claim 35, wherein the fusion protein comprises a T helper epitope that is not present within the polypeptide of claim 1.

38. A fusion protein according to claim 35, wherein the fusion protein comprises an affinity tag.

39. An isolated polynucleotide encoding a fusion protein according to claim 35.

40. A pharmaceutical composition comprising a fusion protein according to claim 32, in combination with a physiologically acceptable carrier.

41. A vaccine comprising a fusion protein according to claim 35, in combination with a non-specific immune response enhancer.

42. A vaccine according to claim 41, wherein the non-specific immune response enhancer is an adjuvant.

43. A vaccine according to claim 41, wherein the non-specific immune response enhancer induces a predominantly Type I response.

44. A pharmaceutical composition comprising a polynucleotide according to claim 40, in combination with a physiologically acceptable carrier.

45. A vaccine comprising a polynucleotide according to claim 40, in combination with a non-specific immune response enhancer.

46. A vaccine according to claim 45, wherein the non-specific immune response enhancer is an adjuvant.

47. A vaccine according to claim 45, wherein the non-specific immune response enhancer induces a predominantly Type I response.

48. A method for inhibiting the development of a cancer in a patient, comprising administering to a patient an effective amount of a pharmaceutical composition according to claim 40 or claim 44.

49. A method for inhibiting the development of a cancer in a patient, comprising administering to a patient an effective amount of a vaccine according to claim 41 or claim 45.

50. A method for removing tumor cells from a biological sample, comprising contacting a biological sample with T cells that specifically react with a prostate tumor protein, wherein the tumor protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(i) polynucleotides recited in any one of SEQ ID NOs:1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375, 381, 382 or 384-472; and

(ii) complements of the foregoing polynucleotides;

wherein the step of contacting is performed under conditions and for a time sufficient to permit the removal of cells expressing the prostate tumor protein from the sample.

51. A method according to claim 50, wherein the biological sample is blood or a fraction thereof.

52. A method for inhibiting the development of a cancer in a patient, comprising administering to a patient a biological sample treated according to the method of claim 50.

53. A method for stimulating and/or expanding T cells specific for a prostate tumor protein, comprising contacting T cells with one or more of:

(i) a polypeptide according to claim 1;

(ii) a polypeptide encoded by a polynucleotide comprising a sequence provided in any one of SEQ ID NOs:1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375, 381, 382 or 384-472;

(iii) a polynucleotide encoding a polypeptide of (i) or (ii); and/or

(iv) an antigen presenting cell that expresses a polypeptide of (i) or (ii);

under conditions and for a time sufficient to permit the stimulation and/or expansion of T cells.

54. An isolated T cell population, comprising T cells prepared according to the method of claim 53.

55. A method for inhibiting the development of a cancer in a patient, comprising administering to a patient an effective amount of a T cell population according to claim 54.

56. A method for inhibiting the development of a cancer in a patient, comprising the steps of:

(a) incubating CD4<sup>+</sup> and/or CD8<sup>+</sup> T cells isolated from a patient with at least one component selected from the group consisting of:

(i) a polypeptide according to claim 1;

(ii) a polypeptide encoded by a polynucleotide comprising a sequence of any one of SEQ ID NOs:1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375, 381, 382 or 384-472;

(iii) a polynucleotide encoding a polypeptide of (i) or (ii); or

(iv) an antigen-presenting cell that expresses a polypeptide of (i) or (ii);

such that T cells proliferate; and

(b) administering to the patient an effective amount of the proliferated T cells, and thereby inhibiting the development of a cancer in the patient.

57. A method for inhibiting the development of a cancer in a patient, comprising the steps of:

- (a) incubating CD4<sup>+</sup> and/or CD8<sup>+</sup> T cells isolated from a patient with at least one component selected from the group consisting of:
- (i) a polypeptide according to claim 1;
  - (ii) a polypeptide encoded by a polynucleotide comprising a sequence of any one of SEQ ID NOs: 1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375, 381, 382 or 384-472;
  - (iii) a polynucleotide encoding a polypeptide of (i) or (ii); or
  - (iv) an antigen-presenting cell that expresses a polypeptide of (i) or (ii);
- such that T cells proliferate;
- (b) cloning at least one proliferated cell; and
- (c) administering to the patient an effective amount of the cloned T cells, and thereby inhibiting the development of a cancer in the patient.

58. A method for determining the presence or absence of a cancer in a patient, comprising the steps of:

- (a) contacting a biological sample obtained from a patient with a binding agent that binds to a prostate tumor protein, wherein the tumor protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:
- (i) polynucleotides recited in any one of SEQ ID NOs: 1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375, 381, 382 or 384-472; and
  - (ii) complements of the foregoing polynucleotides;
- (b) detecting in the sample an amount of polypeptide that binds to the binding agent; and
- (c) comparing the amount of polypeptide to a predetermined cut-off value, and therefrom determining the presence or absence of a cancer in the patient.



59. A method according to claim 58, wherein the binding agent is an antibody.

60. A method according to claim 59, wherein the antibody is a monoclonal antibody.

61. A method according to claim 58, wherein the cancer is prostate cancer.

62. A method for monitoring the progression of a cancer in a patient, comprising the steps of:

(a) contacting a biological sample obtained from a patient at a first point in time with a binding agent that binds to a prostate tumor protein, wherein the tumor protein comprises an amino acid sequence that is encoded by a polynucleotide sequence recited in any one of SEQ ID NOs:1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375, 381, 382 or 384-472, or a complement of any of the foregoing polynucleotides;

(b) detecting in the sample an amount of polypeptide that binds to the binding agent;

(c) repeating steps (a) and (b) using a biological sample obtained from the patient at a subsequent point in time; and

(d) comparing the amount of polypeptide detected in step (c) to the amount detected in step (b) and therefrom monitoring the progression of the cancer in the patient.

63. A method according to claim 62, wherein the binding agent is an antibody.

64. A method according to claim 63, wherein the antibody is a monoclonal antibody.

65. A method according to claim 62, wherein the cancer is a prostate cancer.
66. A method for determining the presence or absence of a cancer in a patient, comprising the steps of:
- (a) contacting a biological sample obtained from a patient with an oligonucleotide that hybridizes to a polynucleotide that encodes a prostate tumor protein, wherein the tumor protein comprises an amino acid sequence that is encoded by a polynucleotide sequence recited in any one of SEQ ID NOs:1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375, 381, 382 or 384-472, or a complement of any of the foregoing polynucleotides;
  - (b) detecting in the sample an amount of a polynucleotide that hybridizes to the oligonucleotide; and
  - (c) comparing the amount of polynucleotide that hybridizes to the oligonucleotide to a predetermined cut-off value, and therefrom determining the presence or absence of a cancer in the patient.
67. A method according to claim 66, wherein the amount of polynucleotide that hybridizes to the oligonucleotide is determined using a polymerase chain reaction.
68. A method according to claim 66, wherein the amount of polynucleotide that hybridizes to the oligonucleotide is determined using a hybridization assay.
69. A method for monitoring the progression of a cancer in a patient, comprising the steps of:
- (a) contacting a biological sample obtained from a patient with an oligonucleotide that hybridizes to a polynucleotide that encodes a prostate tumor

protein, wherein the tumor protein comprises an amino acid sequence that is encoded by a polynucleotide sequence recited in any one of SEQ ID NOs:1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375, 381, 382 or 384-472, or a complement of any of the foregoing polynucleotides;

(b) detecting in the sample an amount of a polynucleotide that hybridizes to the oligonucleotide;

(c) repeating steps (a) and (b) using a biological sample obtained from the patient at a subsequent point in time; and

(d) comparing the amount of polynucleotide detected in step (c) to the amount detected in step (b) and therefrom monitoring the progression of the cancer in the patient.

70. A method according to claim 69, wherein the amount of polynucleotide that hybridizes to the oligonucleotide is determined using a polymerase chain reaction.

71. A method according to claim 69, wherein the amount of polynucleotide that hybridizes to the oligonucleotide is determined using a hybridization assay.

72. A diagnostic kit, comprising:

(a) one or more antibodies according to claim 21; and

(b) a detection reagent comprising a reporter group.

73. A kit according to claim 72, wherein the antibodies are immobilized on a solid support.

74. A kit according to claim 73, wherein the solid support comprises nitrocellulose, latex or a plastic material.

75. A kit according to claim 72, wherein the detection reagent comprises an anti-immunoglobulin, protein G, protein A or lectin.

76. A kit according to claim 72, wherein the reporter group is selected from the group consisting of radioisotopes, fluorescent groups, luminescent groups, enzymes, biotin and dye particles.

77. An oligonucleotide comprising 10 to 40 nucleotides that hybridize under moderately stringent conditions to a polynucleotide that encodes a prostate tumor protein, wherein the tumor protein comprises an amino acid sequence that is encoded by a polynucleotide sequence recited in any one of SEQ ID NOs:2, 3, 8-29, 41-45, 47-52, 54-65, 70, 73-74, 79, 81, 87, 90, 92, 93, 97, 103, 104, 107, 109-111, 115-160, 171, 173-175, 177, 181, 188, 191, 193, 194, 198, 203, 204, 207, 209, 220, 222-225, 227-305, 307-315, 326, 328, 330, 332, 334, 350-365, 381, 382, 384, 386, 389, 390, 392, 393, 396, 401, 402, 407, 408, 410, 413, 415-419, 422, 426, 427, 432, 434, 435, 442-444, 446, 450, 452, 453, 459-461, 468-471 or 472, or a complement of any of the foregoing polynucleotides.

78. A oligonucleotide according to claim 77, wherein the oligonucleotide comprises 10-40 nucleotides recited in any one of SEQ ID NOs:2, 3, 8-29, 41-45, 47-52, 54-65, 70, 73-74, 79, 81, 87, 90, 92, 93, 97, 103, 104, 107, 109-111, 115-160, 171, 173-175, 177, 181, 188, 191, 193, 194, 198, 203, 204, 207, 209, 220, 222-225, 227-305, 307-315, 326, 328, 330, 332, 334, 350-365, 381, 382, 384, 386, 389, 390, 392, 393, 396, 401, 402, 407, 408, 410, 413, 415-419, 422, 426, 427, 432, 434, 435, 442-444, 446, 450, 452, 453, 459-461, 468-471 or 472.

79. A diagnostic kit, comprising:

- (a) an oligonucleotide according to claim 77; and
- (b) a diagnostic reagent for use in a polymerase chain reaction or hybridization assay.

1/6

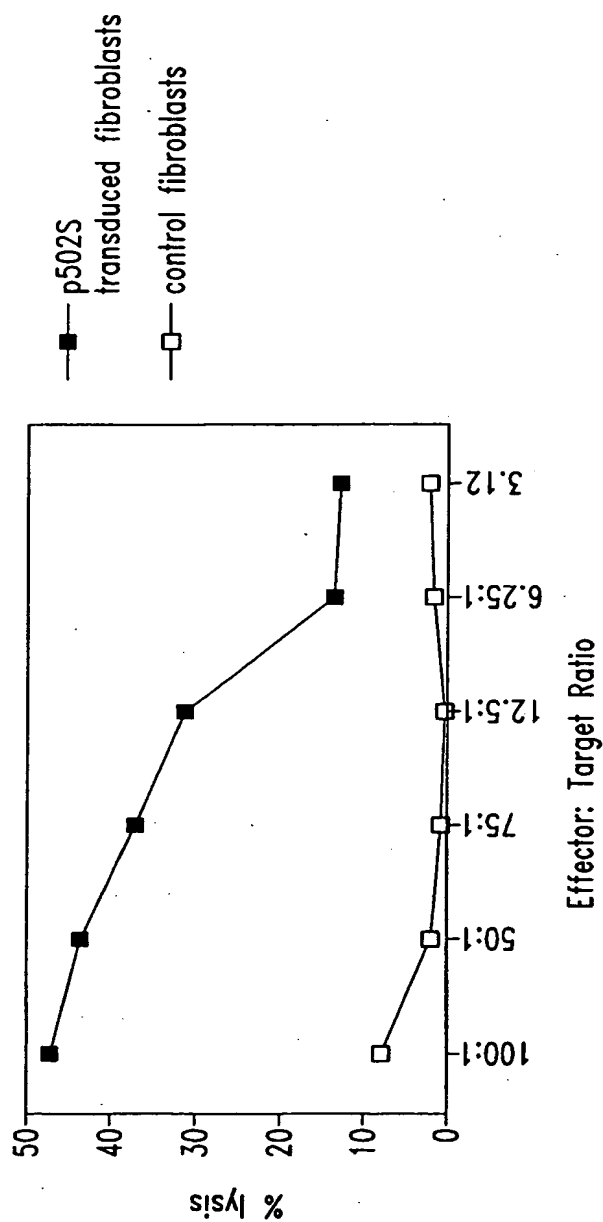
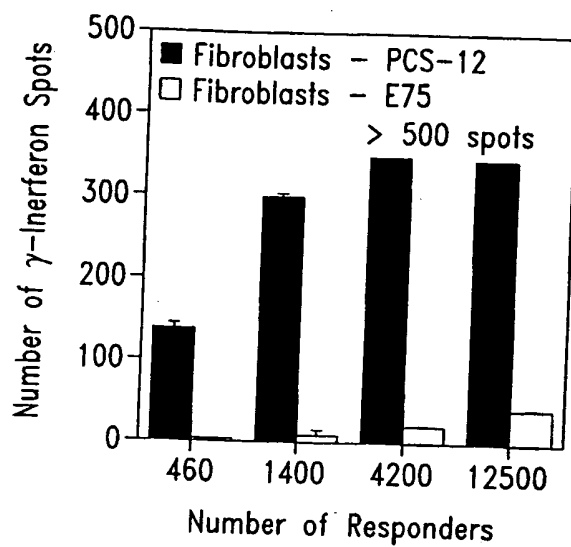
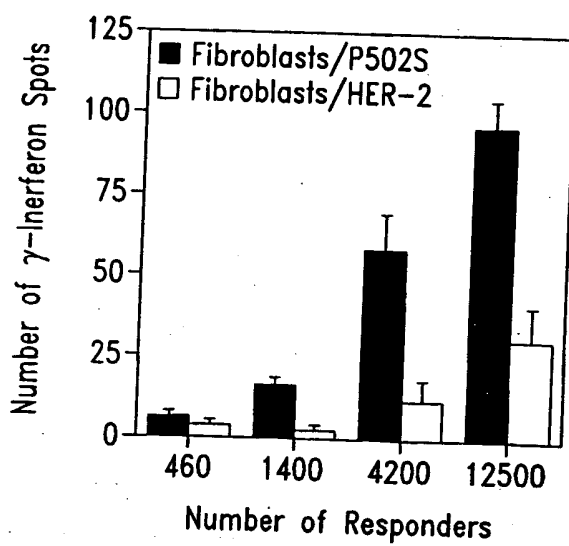


Fig. 1

2/6

*Fig. 2A**Fig. 2B*

3/6

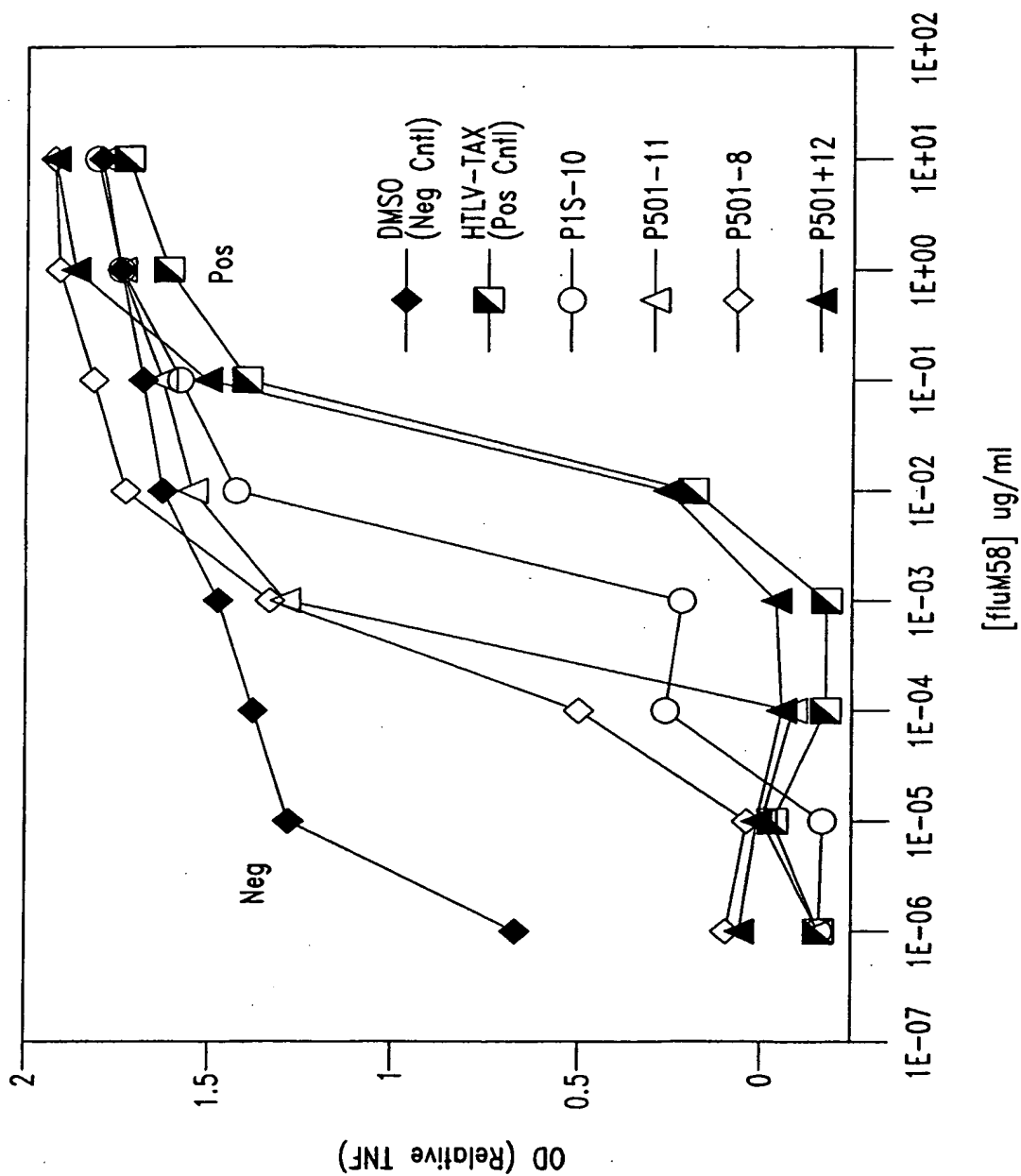


Fig. 3

4/6

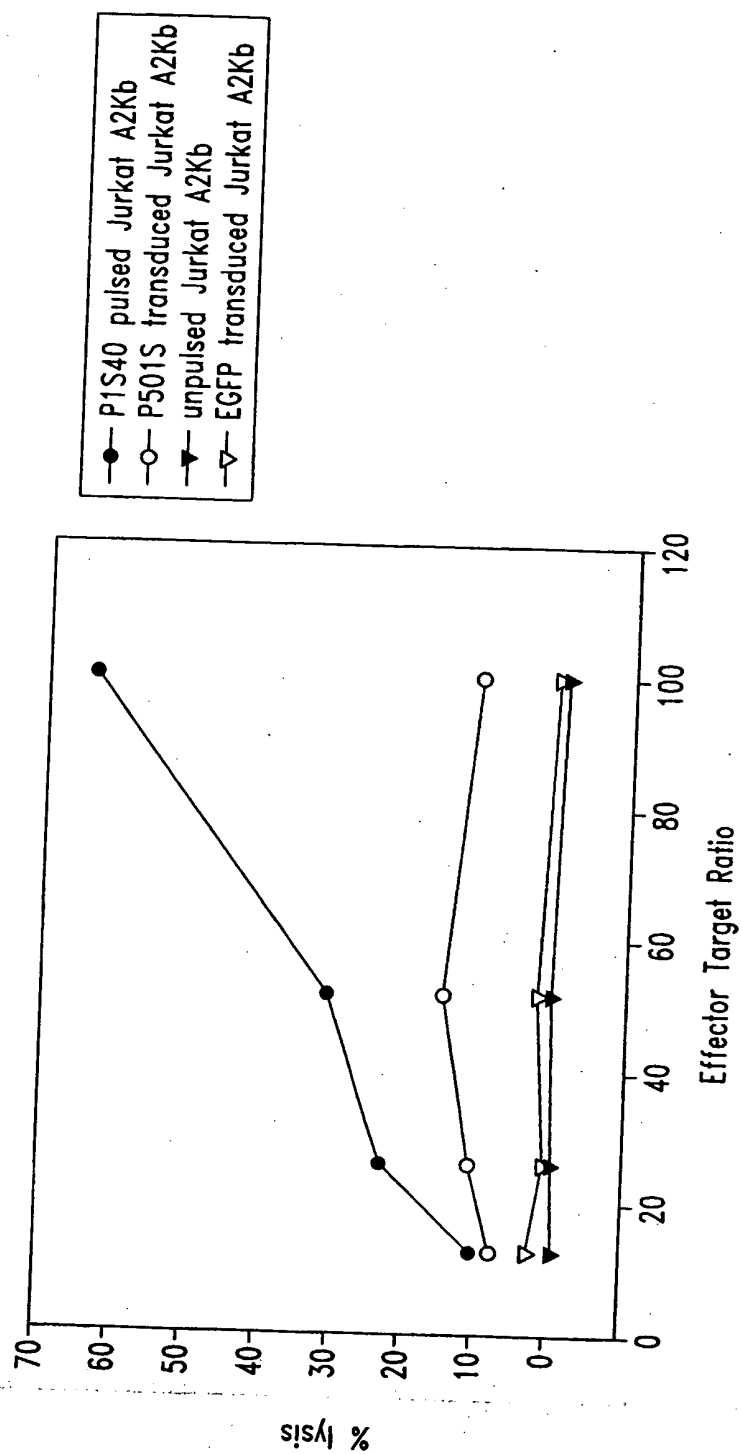


Fig. 4



5/6

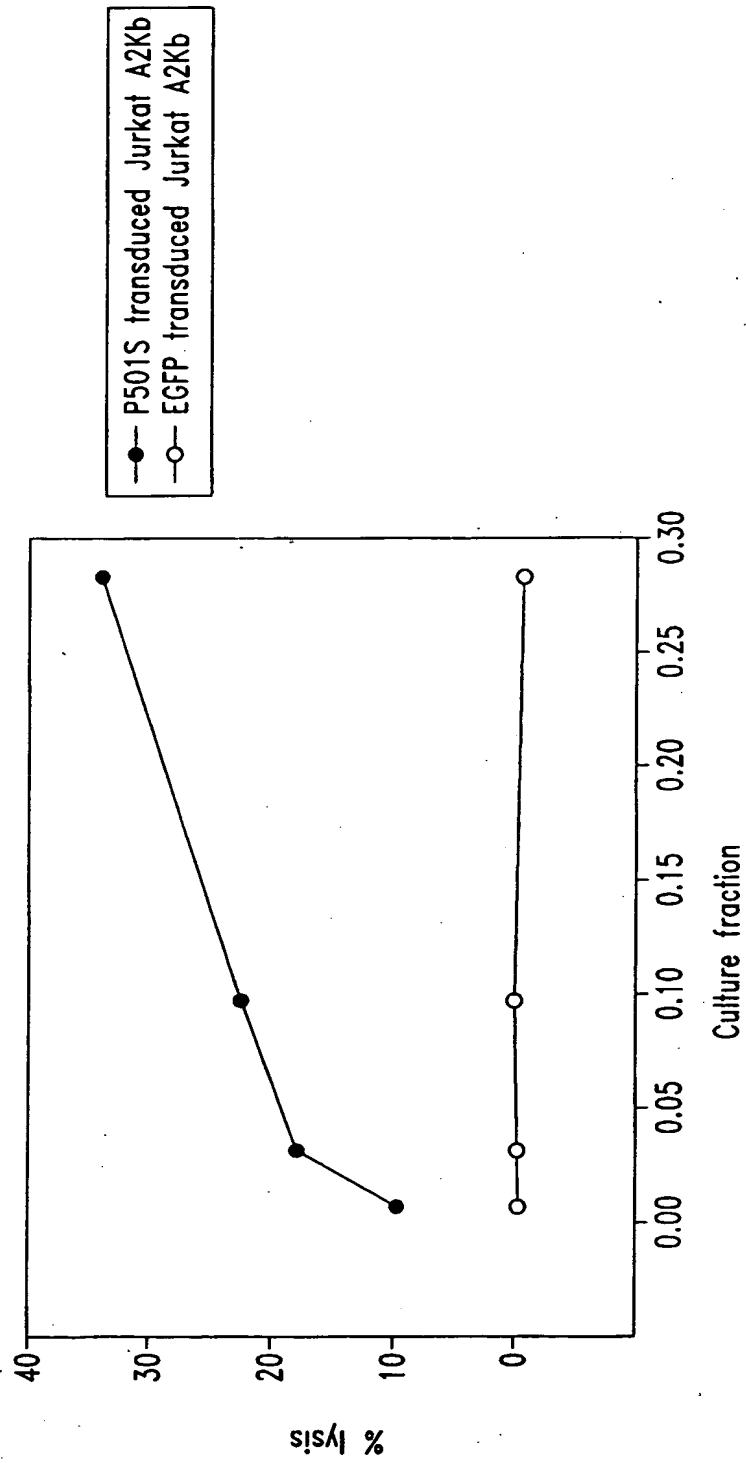
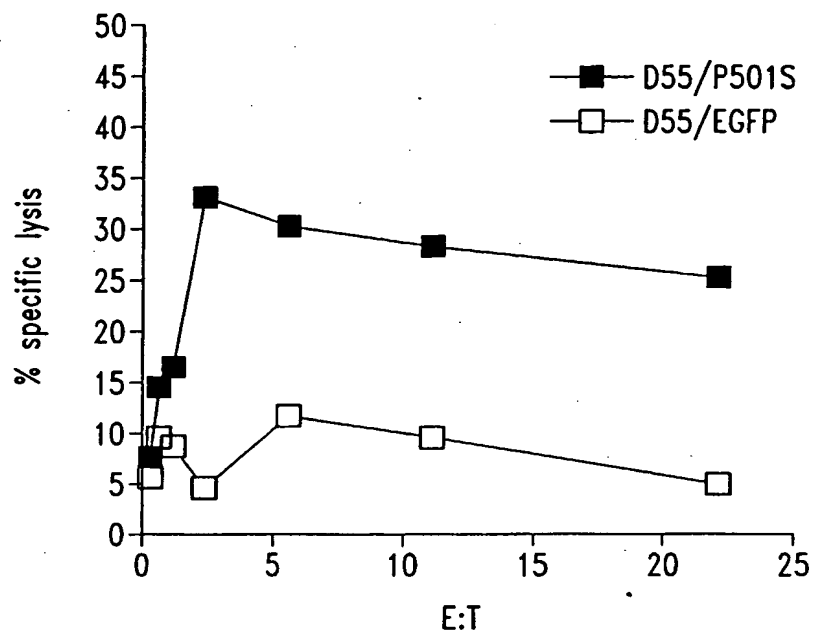
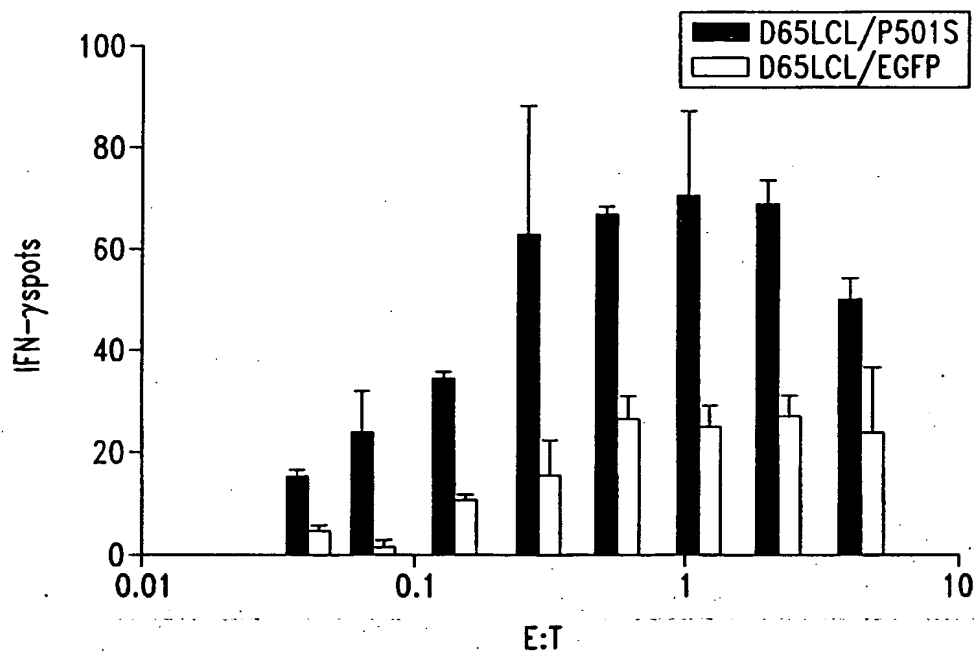


Fig. 5

6/6

*Fig. 6A**Fig. 6B*

## SEQUENCE LISTING

<110> Corixa Corporation et al.

<120> COMPOSITIONS AND METHODS FOR THE THERAPY AND  
DIAGNOSIS OF PROSTATE CANCER

<130> 210121.534PC

<140> PCT

<141> 2000-10-04

<160> 476

<170> FastSEQ for Windows Version 3.0

<210> 1

<211> 814

<212> DNA

<213> Homo sapien

<220>

<221> misc\_feature

<222> (1)...(814)

<223> n = A,T,C or G

<400> 1

tttttttttt	tttttcacag	tataacagct	ctttatttct	gtgagttcta	ctaggaaatc	60
atcaaactcg	agggttgct	ggaggacttc	aatacacctc	cccccatagt	gaatcagctt	120
ccaggggggc	cagtccctct	ccttacttca	tccccatccc	atgccaaagg	aagaccctcc	180
ctccttggt	cacagccttc	tctaggcttc	ccagtgcctc	caggacagag	tgggttatgt	240
tttcagctcc	atccttgctg	tgagtgtctg	gtgcggttg	cctccagctt	ctgctcagtg	300
cttcatggac	agtgtccagc	acatgtcaact	ctccactctc	tcagtgtgga	tccactagtt	360
ctagagcggc	cgccaccgcg	gtggagctcc	agcttttggt	cccttttagt	agggttaatt	420
gcgcgcttg	cgtaatcatg	gtcataactg	tttcctgtgt	gaaattgtta	tccgctcaca	480
attccacaca	acatacgagc	cgggaagcata	aagtgtaaag	cctgggggtgc	ctaatagagt	540
anctaaactca	cattaattgc	gttgcgctca	ctgnccgctt	tccagtcngg	aaaactgtcg	600
tgccagctgc	attaatgaat	cggccaacgc	ncgggggaaa	gcggtttg	ttttgggggc	660
tcttccgctt	ctcgtcact	nantcctg	ctcggtcntt	cggtgcggg	gaacggtatc	720
actcctcaaa	ggnggtatta	cgttatccn	naaatcnggg	gataccngg	aaaaaanttt	780
aacaaaagg	cancaaagg	cngaaacgta	aaaa			814

<210> 2

<211> 816

<212> DNA

<213> Homo sapien

<220>

<221> misc\_feature

<222> (1)...(816)

<223> n = A,T,C or G

<400> 2

acagaaatgt	tggatggtg	agcacctt	tatacgactt	acaggacagc	agatggggaa	60
ttcatggctg	ttggagcaat	agaaccccag	ttctacgagc	tgctgatcaa	aggacttgga	120
ctaaagtctg	atgaacttcc	caatcagatg	agcatggatg	attggccaga	aatgaagaag	180
aagtttgag	atgtatttgc	aaagaagacg	aaggcagagt	ggtgtcaa	ctttgacggc	240
acagatgcct	gtgtgactcc	ggttctgact	tttgaggagg	ttgttcatca	tgatcacaa	300
aaggaacggg	gctcgtttat	caccagttag	gagcaggacg	tgagcccccg	ccctgcacct	360
ctgctgttaa	acaccccagc	catcccttct	ttcaaaagg	atccactagt	tctagaagcg	420
gccgccaccg	cgggtggagct	ccagcttttg	ttccctttag	tgagggttaa	ttgcgcgctt	480

ggcgtaatca	tggatcatagc	tgttttctgt	gtgaaattgt	tatccgctca	caattccccc	540
aacatacgag	ccggaacata	aagtgttaag	cctgggggtgc	ctaagtantg	agctaactcn	600
cattaattgc	gttgcgctca	ctgcccgtt	tccagtcggg	aaaactgtcg	tgccactgcn	660
ttantgaatc	ngccaccccc	cgggaaaagg	cggttgcntt	ttgggcctct	tccgttttcc	720
tcgctcattg	atcctngcnc	ccggtcttcg	gctgcggnga	acggttcact	cctcaaagggc	780
ggtnntccgg	ttatccccaa	acnggggata	ccnga			816

<210> 3  
 <211> 773  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(773)  
 <223> n = A,T,C or G

<400> 3						
cttttgaaag	aagggatggc	tgggggtgtt	aacagcagag	gtgcagggcg	ggggctcacg	60
tcttgctcct	cactgggtgat	aaacgagccc	cgttccttgt	tgtgatcatg	atgaacaacc	120
tcctcaaaag	tcagaaccgg	agtcacacag	gcatctgtgc	cgtcaaagat	ttgacaccac	180
tctgccttcg	tcttctttgc	aaatacatct	gcaaacttct	tcttcatttc	tgccaatca	240
tccatgctca	tctgattggg	aagttcatca	gactttagtc	canntccttt	gatcagcagc	300
tcgtagaact	ggggttctat	tgctccaaca	gccatgaatt	ccccatctgc	tgtcctgtaa	360
gtcgtataga	aagggtgctcc	accatccaac	atgttctgtc	ctcgaggggg	ggccccgtac	420
ccaattcgcc	ctatantgag	tcgtattacg	cgcgctcact	ggccgtcggt	ttacaacgtc	480
gtgactggga	aaaccctggg	cgttaccaac	ttaatcgctt	tgcagcacat	ccccctttcg	540
ccagctgggc	gtaatancca	aaaggcccgc	accgatcgcc	cttccaacag	ttgcgcacct	600
gaatgggnaa	atgggacccc	cctgttaccg	cgcattnaac	ccccgcnggg	tttngttgtt	660
acccccacnt	nnaccgctta	cactttgcca	gcgccttanc	gcccgtcccc	tttncctttt	720
cttcccttcc	tttncncncn	ctttcccccg	gggtttcccc	cntcaaacc	cna	773

<210> 4  
 <211> 828  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(828)  
 <223> n = A,T,C or G

<400> 4						
cctcctgagt	cctactgacc	tgtgctttct	ggtgtggagt	ccagggctgc	taggaaaagg	60
aatgggcaga	cacaggtgta	tgccaatgtt	tctgaaatgg	gtataatttc	gtcctctcct	120
tcggaacact	ggctgtctct	gaagacttct	cgctcagttt	cagtgaggac	acacacaaag	180
acgtgggtga	ccatgttggt	tgtgggggtg	agagatggga	gggggtgggg	ccaccctgga	240
agagtggaca	gtgacacaag	gtggacactc	tctacagatc	actgaggata	agctggagcc	300
acaatgcatg	aggcacacac	acagcaagga	tgacnctgta	aacatagccc	acgtgtcctt	360
gnnggcactg	ggaagcctan	atnaggccgt	gagcanaaag	aaggggagga	tccactagtt	420
ctanagcggc	cgccaccgcg	gtgganctcc	ancttttgtt	cccttttagt	agggttaatt	480
gcgcgcttgg	cnaatcatg	gtcatanctn	tttctgtgtg	gaaattgtta	tccgctcaca	540
attccacaca	acatacganc	cggaacata	aantgtaaac	ctgggggtgcc	taatgantga	600
ctaactcaca	ttaattgcgt	tgcgctcact	gcccgttttc	caatcnggaa	acctgtcttg	660
ccncttgcat	tnatgaatcn	gccaaacccc	ggggaaaagc	gtttgcgttt	tgggcgctct	720
tccgcttctc	cncctantta	ntccctnenc	tcggtcattc	cggctgcngc	aaaccggttc	780
accnctcca	aaggggggtat	tccggtttcc	ccnaatccgg	gganance		828

<210> 5  
 <211> 834  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(834)  
 <223> n = A,T,C or G

<400> 5

tttttttttt	tttttactga	tagatggaat	ttattaagct	tttcacatgt	gatagcacat	60
agttttaatt	gcatccaaag	tactaacaaa	aactctagca	atcaagaatg	gcagcatggt	120
attttataac	aatcaacacc	tgtggctttt	aaaatttggg	tttcataaga	taattttatac	180
tgaagtaa	ctagccatgc	ttttaaaaaa	tgcttttaggt	cactccaagc	ttggcagtta	240
acatttggca	taaaacaataa	taaaacaatc	acaattttaat	aaataacaaa	tacaacattg	300
taggccataa	tcatatacag	tataaggaaa	agggtggtagt	gttgagtaag	cagttatttag	360
aatagaatac	cttggcctct	atgcaaatat	gtctagacac	tttgattcac	tcagccctga	420
cattcagttt	tcaaagtagg	agacagggtc	tacagtatca	ttttacagtt	tccaacacat	480
tgaaaacaag	tagaaaatga	tgagttgatt	tttattaatg	cattacatcc	tcaagagtta	540
tcaccaaccc	ctcagttata	aaaaattttc	aagttatatt	agtcataata	cttgggtgtgc	600
ttatttttaa	ttagtgtctaa	atggattaag	tgaagacaac	aatggtcccc	taatgtgatt	660
gatattggtc	attttttacca	gcttctaaat	ctnaactttc	aggcttttga	actggaacat	720
tgnatnacag	tgttccanag	tttcaaccta	ctggaacatt	acagtgtgct	tgattcaaaa	780
tgttattttg	ttaaaaatta	aattttaacc	tggtggaaaa	ataatttgaa	atna	834

<210> 6  
 <211> 818  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(818)  
 <223> n = A,T,C or G

<400> 6

tttttttttt	tttttttttt	aagaccctca	tcaatagatg	gagacataca	gaaatagtca	60
aaccacatct	acaaaatgcc	agtatcaggc	ggcggcttcg	aagccaaagt	gatgtttgga	120
tgtaaaagtga	aatattagtt	ggcggatgaa	gcagatagtg	aggaaagtgt	agccaataat	180
gacgtgaagt	ccgtggaagc	ctgtggctac	aaaaaatgtt	gagccgtaga	tgccgtcgga	240
aatggtgaag	ggagactcga	agtactctga	ggcttgtagg	agggtaaaat	agagaccag	300
taaaattgta	ataagcagtg	cttgaattat	ttggtttcgg	ttgttttcta	ttagactatg	360
gtgagctcag	gtgattgata	ctcctgatgc	gagtaatacg	gatgtgttta	ggagtgggac	420
ttctagggga	tttagcgggg	tgatgcctgt	tgggggccag	tgccctccta	gttgggggggt	480
aggggctagg	ctggagtggg	aaaaggctca	gaaaaatcct	gcgaagaaaa	aaacttctga	540
ggtaataaat	aggattatcc	cgatatcgaag	gccttttttg	acagggtgtg	tgtggtggcc	600
ttggtatgtg	ctttctcgtg	ttacatcgcg	ccatcattgg	tatatgttta	gtgtgttggg	660
ttantangg	ctantatgaa	gaacttttgg	antggaatta	aatcaatngc	ttggccggaa	720
gtcattanga	nggctnaaaa	ggccctgtta	ngggtctggg	ctnggtttta	cccnaccat	780
ggaatncncc	ccccggacna	ntgnatccct	attcttaa			818

<210> 7  
 <211> 817  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(817)  
 <223> n = A,T,C or G

<400> 7

tttttttttt	tttttttttt	tggtcttaga	gggggttagag	gggggtgctat	agggtaaata	60
cgggccctat	ttcaaagatt	tttaggggaa	ttaattctag	gacgatgggt	atgaaactgt	120
ggtttgctcc	acagatttca	gagcattgac	cgtagtatac	ccccggtcgt	gtagcgggtga	180

```

aagtggtttg gtttagacgt ccggaattg catctgtttt taagcctaata gtggggacag 240
ctcatgagtg caagacgtct tgtgatgtaa ttattatacn aatgggggct tcaatcggga 300
gtactactcg attgtcaacg tcaaggagtc gcaggtcgcc tggttctagg aataatggg 360
gaagtatgta ggaattgaag attaatccgc cgtagtcggt gttctcctag gttcaatacc 420
attggtggcc aattgatttg atggttaagg gagggatcgt tgaactcgtc tgttatgtaa 480
aggatncctt ngggatggga aggcnatnaa ggactangga tnaatggcgg gcangattatt 540
tcaaacngtc tctanttcct gaaacgtctg aaatgttaat aanaattaan tttngttatt 600
gaatnttnng gaaaagggct tacaggacta gaaaccaaata angaaaanta atnntaangg 660
cnttatcntn aaaggtnata accnctccta tnatcccacc caatngnatt cccacncnn 720
acnattggat nccccanttc canaaanggc cccccccgg tgnannccnc cttttgttcc 780
cttnantgan gggtattcnc ccctngcntt atcancc 817

```

&lt;210&gt; 8

&lt;211&gt; 799

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(799)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 8

```

catttccggg tttactttct aaggaaagcc gagcggaagc tgctaacgtg ggaatcgggtg 60
cataaggaga actttctgct ggcacgcgct agggacaagc gggagagcga ctccgagcgt 120
ctgaagcgca cgtcccagaa ggtggacttg gcaactgaaac agctgggaca catccgcgag 180
tacgaacagc gcctgaaagt gctggagcgg gaggtccagc agtgtagccg cgtcctgggg 240
tgggtggccg angcctganc cgtctgcct tgctgcccc angtgggccg ccccccctg 300
acctgcctgg gtccaaacac tgagccctgc tggcggactt caagganaac cccacangg 360
ggattttgct cctanantaa ggctcatctg ggccctcgcc ccccccctg gttggccttg 420
tctttgangt gagccccatg tccatctggg ccactgtcng gaccaccttt ngggagtgtt 480
ctccttaciaa ccacannatg cccggctcct cccggaaacc antcccance tnggaaggat 540
caagnccctn atccactnnt nctanaaccg gccnccnccg cngtggaacc cnccttntgt 600
tccttttctn tnagggttaa tnnccgcttg gccttnccan ngctcctnnc nttttccnnt 660
gttnaaattg ttangcnccc nccntcccn cnnnnncan cccgaccenn annttnnann 720
nccctggggg nccnnccgat tgaccnccc nccctntant tgcnttnggg ncnntgccc 780
ctttccctct nggganncg 799

```

&lt;210&gt; 9

&lt;211&gt; 801

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(801)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 9

```

acgccttgat cctcccaggc tgggactggt tctgggagga gccgggcatg ctgtggtttg 60
taangatgac actcccaaag gtggtcctga cagtggccca gatggacatg gggctcacct 120
caaggacaag gccaccagggt gcgggggccc aagcccacat gatccttact ctatgacaa 180
aatccctgt gggggcttct ccttgaagtc cgccancagg gctcagtctt tggaccang 240
caggtcatgg ggttgtnngc caactggggg ccncaacgca aaanggcnaa gggcctcngn 300
caccatccc angacgcggc tacactnctg gacctcccnc tccaccactt tcatgcgctg 360
ttcntaccgc cgnatntgtc ccnctgttt cngtgccnnc tccancttct nggacgtgcg 420
ctacatacgc cggantcnc nctcccgctt tgcctctatc cagtnccan caacaaattt 480
cncctantg caccnattcc cacntttnc agntttccnc nncnggcttc cttntaaaag 540
ggttgancce cggaaaatnc cccaaagggg gggggccngg tacccaactn cccctnata 600
gctgaantcc ccatnaccnn gnetcnatgg anccntcent tttaannacn tctnaactt 660
gggaanance ctcgnccntn ccccnttaa tccnccctg cnangnnct ccccnntcc 720
ncccnntng gcntntnann cnaaaaaggc cennnancan tctcctnnn cctcanttcg 780

```

ccanccctcg aaatcgccn c

801

<210> 10  
 <211> 789  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(789)  
 <223> n = A,T,C or G

<400> 10  
 cagtctatnt ggccagtgtg gcagctttcc ctgtggctgc cgggtgccaca tgccctgtccc 60  
 acagtgtggc cgtgggtgaca gcttcagccg ccctcaccgg gttcaccttc tcagccctgc 120  
 agatccctgcc ctacacactg gcctccctct accaccggga gaagcagggtg ttccctgcccc 180  
 aataccgagg ggacactgga ggtgctagca gtgaggacag cctgatgacc agcttcctgc 240  
 caggccctaa gcctggagct cccttcccta atggacacgt ggggtgctgga ggcagtggcc 300  
 tgctcccacc tccaccccg cctctgcggg cctctgcctg tgatgtctcc gtacgtgtgg 360  
 tgggtgggtga gccaccgan gccagggtgg ttccggggcg gggcatctgc ctggacctgc 420  
 ccatacctgga tagtgcttcc tgctgtccca ngtggcccca tccctgttta tgggtccat 480  
 tgtccagctc agccagtctg tcaactgccta tatggtgtct gccgcaggcc tgggtctggt 540  
 cccatttact ttgctacaca ggtantattt gacaagaacg anttggccaa atactcagcg 600  
 ttaaaaaatt ccagcaacat tgggggtgga aggcctgcct cactgggtcc aactccccgc 660  
 tccctgttaac cccatggggc tgccggcttg gccgccatt tctgttgctg ccaaantnat 720  
 gtggctctct gctgccacct gttgctggct gaagtgcnta cngcncanct nggggggtng 780  
 gngttccc 789

<210> 11  
 <211> 772  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(772)  
 <223> n = A,T,C or G

<400> 11  
 cccaccctac ccaaatatta gacaccaaca cagaaaagct agcaatggat tcccttctac 60  
 tttgttaaat aaataagtta aatattttaa tgccctgtgtc tctgtgatgg caacagaagg 120  
 accaacaggc cacatcctga taaaaggtaa gaggggggtg gatcagcaaa aagacagtgc 180  
 tgtgggtga ggggacctg ttcttgtgtg ttgcccctca ggactcttcc cctacaaata 240  
 actttcatat gttcaaatcc catggaggag tgtttcatcc tagaaactcc catgcaagag 300  
 ctacattaaa cgaagctgca ggttaagggg cttanagatg ggaaaccagg tgactgagtt 360  
 tattcagctc ccaaaaaccc ttctctaggt gtgtctcaac taggaggcta gctgttaacc 420  
 ctgagcctgg gtaatccacc tgcagagctc ccgcattcca gtgcatggaa cccttctggc 480  
 ctccctgtat aagtcagac tgaaccccc ttggaaggnc tccagtcagg cagccctana 540  
 aactggggaa aaaagaaaag gacgccccan ccccagctg tgcanctacg cacctcaaca 600  
 gcacagggtg gcagcaaaaa aaccacttta ctttggcaca aacaaaaact ngggggggca 660  
 accccggcac cccnangggg gttaacagga ancnnggnaa cntggaaccc aattnaggca 720  
 ggcccnccac cccnaatntt gctgggaaat ttttccctcc ctaaattntt tc 772

<210> 12  
 <211> 751  
 <212> DNA  
 <213> Homo sapi n

<220>  
 <221> misc\_feature  
 <222> (1)...(751)  
 <223> n = A,T,C or G

&lt;400&gt; 12

gcccccaattc	cagctgcccac	accaccccacg	gtgactgcat	tagttcggat	gtcatacaaaa	60
agctgattga	agcaaccctc	tacttttttg	tcgtgagcct	tttgcttgg	gcaggtttca	120
ttggctgtgt	tggtgacgtt	gtcattgcaa	cagaatggg	gaaaggcact	gttctctttg	180
aagtanggtg	agtcctcaaa	atccgtatag	ttggtgaagc	cacagcactt	gagccctttc	240
atggtgggtg	tccacacttg	agtgaagtct	tcctgggaac	cataatcttt	cttgatggca	300
ggcactacca	gcaacgtcag	ggaagtgtc	agccattgtg	gtgtacacca	aggcgaccac	360
agcagctgcn	acctcagcaa	tgaagatgan	gaggangatg	aagaagaacg	tcncgagggc	420
acatttgctc	tcagtcttan	caccatanca	gcccntgaaa	accaananca	aagaccacna	480
cnccggctgc	gatgaagaaa	tnaccccneg	ttgacaaact	tgcatggcac	tggganccac	540
agtggcccn	aaaatcttca	aaaaggatgc	cccatcnatt	gaccccccaa	atgccactg	600
ccaacagggg	ctgccccacn	cncnnaacga	tgancnatt	gnacaagatc	tnctnggtct	660
tnatnaacnt	gaaccctgcn	tngtggctcc	tggtcaggnc	cnnggcctga	cttctnaann	720
aangaactcn	gaagncccca	cnngganann	g			751

&lt;210&gt; 13

&lt;211&gt; 729

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(729)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 13

gagccaggcg	tcctctgccc	tgcccactca	gtggcaacac	ccgggagctg	ttttgtcctt	60
tgtggancct	cagcagtncc	ctctttcaga	actcantgcc	aaganccctg	aacaggagcc	120
accatgcagt	gcttcagctt	cattaagacc	atgatgatcc	tcttcaattt	gctcatcttt	180
ctgtgtgggtg	cagccctgtt	ggcagtgggc	atctgggtgt	caatcgatgg	ggcatccttt	240
ctgaagatct	tcggggccact	gtcgtccagt	gccatgcagt	ttgtcaacgt	gggtacttct	300
ctcatcgag	ccggcggtgt	ggtcttagct	ctaggtttcc	tgggctgcta	tggtgctaag	360
actgagagca	agtgtgccct	cgtgacgttc	ttcttcatcc	tcctcctcat	cttcattgct	420
gaggttgcaa	tgctgtggtc	gccttggtgt	acaccacaat	ggctgagcac	ttcctgacgt	480
tgctggtaat	gcctgccatc	aanaaaagat	tatgggttcc	caggaanact	tcactcaagt	540
gttggaacac	caccatgaaa	gggtcgaagt	gctgtggctt	cnnccaacta	tacggatttt	600
gaagantcac	ctacttcaaa	gaaaanagtg	cctttccccc	atttctgttg	caattgacaa	660
acgtccccc	cacagccaat	tgaaaacctg	cacccaaccc	aaanggggtcc	ccaaccanaa	720
attnaagg						729

&lt;210&gt; 14

&lt;211&gt; 816

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(816)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 14

tgctcttct	caaagttgtt	cttgttgcca	taacaaccac	cataggtaaa	gcgggcgcag	60
tggttcgtga	aggggttgta	gtaccagcgc	gggatgctct	ccttgagag	tcctgtgtct	120
ggcagggtcca	cgcagtcccc	tttgtcactg	gggaaatgga	tgcgctggag	ctcgtcaaag	180
ccactcgtgt	atttttca	ggcagcctcg	tccgacgcgt	cggggcagtt	gggggtgtct	240
tcacactcca	ggaaactgtc	natgcagcag	ccattgctgc	agcggaactg	ggtgggctga	300
cangtgccag	agcacactgg	atggcgctt	tccatgnnan	gggccctgng	ggaaagtccc	360
tgancccan	anctgcctct	caaangcccc	accttgacac	ccccgacagg	ctagaatgga	420
atcttcttcc	cgaaaggtag	ttnttcttgt	tgcccaancc	anccccntaa	acaaactctt	480
gcanatctgc	tccngggggg	tctantacc	ancgtgggaa	aagaacccca	ggcngcgaac	540
caancttgtt	tggatncgaa	gcnataatct	nctnttctgc	ttggtggaca	gcaccantna	600



ctgtnnanct	ttagnccntg	gtcctcntgg	ggtgnncttg	aacctaaten	ccnntcaact	660
gggacaaggt	aantngccnt	cctttnaatt	cccnancntn	ccccctgggt	tgggggtttt	720
cncnctccta	ccccagaaan	nccgtgttcc	cccccaacta	ggggccnaaa	ccnnttnttc	780
cacaaccctn	ccccaccac	gggttcngnt	ggttng			816

<210> 15  
 <211> 783  
 <212> DNA  
 <213> Homo sapien  
  
 <220>  
 <221> misc\_feature  
 <222> (1)...(783)  
 <223> n = A,T,C or G

<400> 15						
ccaaggcctg	ggcaggcata	nacttgaagg	tacaacccca	ggaacccctg	gtgctgaagg	60
atgtggaaaa	cacagattgg	cgctactgc	ggggtgacac	ggatgtcagg	gtagagagga	120
aagacccaaa	ccaggtggaa	ctgtggggac	tcaaggaang	cacctacctg	ttccagctga	180
cagtgactag	ctcagaccac	ccagaggaca	cggccaacgt	cacagtcact	gtgctgtcca	240
ccaagcagac	agaagactac	tgcctcgcat	ccaacaangt	gggtcgctgc	cggggctctt	300
tcccacgctg	gtactatgac	cccacggagc	agatctgcaa	gagtttcgtt	tatggaggct	360
gcttgggcaa	caagaacaac	taccttcggg	aagaagagt	cattctancc	tgtcnggggtg	420
tgcaagggtg	gcctttgana	ngcanctctg	gggctcangc	gactttcccc	cagggccctt	480
ccatggaaa	gcgccatcca	ntgttctctg	gcacctgtca	gcccacccag	ttccgctgca	540
ncaatggctg	ctgcacnac	antttcctng	aattgtgaca	acacccccca	ntgcccccaa	600
ccctcccaac	aaagcttccc	tgtnnaaaaa	tacnccantt	ggcttttnac	aaacncccg	660
cncctcctnt	ttcccnntn	aacaaagggc	nctngcnttt	gaactgcccn	aaccnnggaa	720
tctnccnngg	aaaaantncc	ccccctgggt	cctnnaancc	cctccncaaa	anctncccc	780
ccc						783

<210> 16  
 <211> 801  
 <212> DNA  
 <213> Homo sapien  
  
 <220>  
 <221> misc\_feature  
 <222> (1)...(801)  
 <223> n = A,T,C or G

<400> 16						
gccccaatc	cagctgccac	accaccacg	gtgactgcat	tagttcggat	gtcatacaaa	60
agctgattga	agcaaccctc	tactttttgg	tcgtgagcct	tttgcttggt	gcaggtttca	120
ttggctgtgt	tggtgacgtt	gtcattgcaa	cagaatgggg	gaaaggcact	gttctctttg	180
aagtaggggtg	agtcctcaaa	atccgtatag	ttggtgaagc	cacagcactt	gagccctttc	240
atggtggtgt	tccacacttg	agtgaagtct	tcctgggaac	cataatcttt	cttgatggca	300
ggcactacca	gcaacgtcag	gaagtgtctca	gccattgttg	tgtacaccaa	ggcgaccaca	360
gcagctgcaa	cctcagcaat	gaagatgagg	aggaggatga	agaagaacgt	cncgagggca	420
cacttgctct	ccgtcttagc	accatagcag	cccangaaac	caagagcaaa	gaccacaacg	480
ccngctgcga	atgaaagaaa	ntaccacagt	tgacaaactg	catggccact	ggacgacagt	540
tggcccgaan	atcttcagaa	aagggatgcc	ccatcgattg	aacaccana	tgccactgc	600
cnacagggct	gcnccnncn	gaaagaatga	gccattgaag	aaggatcntc	ntggtcttaa	660
tgaactgaaa	ccntgcatgg	tggcccctgt	tcagggtctc	tggcagtga	ttctganaaa	720
aaggaaacngc	ntnagcccc	ccaaangana	aaacaccccc	gggtgttgcc	ctgaattggc	780
ggccaaggan	ccctgccccn	g				801

<210> 17  
 <211> 740  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(740)  
 <223> n = A,T,C or G

<400> 17  
 gtgagagcca ggcgtccctc tgccctgccc ctcagtggca acacccggga gctgttttgt 60  
 cctttgtgga gcctcagcag ttccctcttt cagaactcac tgccaagagc cctgaacagg 120  
 agccaccatg cagtgtctca gcttcattaa gaccatgatg atcctcttca atttgtcat 180  
 ctttctgtgt ggtgcagccc tgttggcagt gggcatcttg gtgtcaatcg atggggcatc 240  
 ctttctgaag atcttcgggc cactgtcgtc cagtgccatg cagtttgtca acgtgggcta 300  
 ctctctcatc gcagccggcg ttgtgggtctt tgctcttggg ttctctgggt gctatgggtg 360  
 taagacggag agcaagtgtg ccctcgtgac gttcttcttc atctctctcc tcatcttcat 420  
 tgctgaagtt gcagctgctg tggctgcctt ggtgtacacc acaatggctg aaccattcct 480  
 gacgttgctg gtantgcctg ccatcaanaa agattatggg ttcccaggaa aaattcactc 540  
 aantntggaa caccnccatg aaaagggctc caatttctgn ttgcttcccc aactataccg 600  
 gaattttgaa agantcnccc tacttccaaa aaaaaanant tgccttttnc cccntttctgt 660  
 tgcaatgaaa acntcccaan acngccaatn aaaacctgcc cnnncaaaaa ggntcncaaa 720  
 caaaaaaant nnaagggttn 740

<210> 18  
 <211> 802  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(802)  
 <223> n = A,T,C or G

<400> 18  
 ccgctgggtg cgctgggtcca gngnagccac gaagcacgtc agcatacaca gcctcaatca 60  
 caaggtcttc cagctgccgc acattacgca gggcaagagc ctccagcaac actgcatatg 120  
 ggatacactt tacttttagca gccagggtga caactgagag gtgtcgaagc ttattcttct 180  
 gagcctctgt tagtgaggga agattccggg cttcagctaa gtagtcagcg tatgtcccat 240  
 aagcaaacac tgtgagcagc cggaaggtag aggcaaagtc actctcagcc agctctctaa 300  
 cattgggcat gtccagcagt tctccaaaca cgtagacacc agnggcctcc agcacctgat 360  
 ggatgagtgt ggccagcgct gcccccttgg ccgacttggc taggagcaga aattgtcct 420  
 ggttctgccc tgtcaccttc acttcgcac tcatcactgc actgagtgtg ggggacttgg 480  
 gctcaggatg tccagagacg tggttccgcc ccctcnctta atgacaccgn ccanncaacc 540  
 gtcggctccc gccgantng ttcgtcgtnc ctgggtcagg gtctgctggc cnetacttgc 600  
 aancctcgtc nggcccattg aattcaccnc accggaactn gtangatcca ctntttctat 660  
 aaccgncgc caccgcnntc ggaactccac tcttnttnc tttacttgag ggtaaggtc 720  
 acccttnncg ttaccttggg ccaaaccntn cntgtgtcg anatngtnaa tcnggnccna 780  
 tnccanccnc atangaagcc ng 802

<210> 19  
 <211> 731  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(731)  
 <223> n = A,T,C or G

<400> 19  
 cnaagcttcc aggtnacggg ccgcnancc tgaccnagg tancanaang cagnncggg 60  
 gagccaccg tcacngngng gngtctttat nggagggggc ggagccacat cnetggacnt 120  
 cntgacccca actcccnc nncantgca gtgatgagtg cagaactgaa ggtnacgtg 180  
 caggaaccaa gancaaannc tgctccntc caagtcggcn nagggggcgg ggctggccac 240  
 gencatccnt cnagtgtgn aaagccccnn cctgtctact tgtttgaga acngcnnga 300

catgcccagn	gttanataac	nggcngagag	tnantttgcc	tctcccttcc	ggctgcgcan	360
cgngtntgct	tagnggacat	aacctgacta	cttaactgaa	cccngaate	tnccnccccct	420
ccactaagct	cagaacaaaa	aacttegaca	ccactcantt	gtcacctgnc	tgctcaagta	480
aagtgtaccc	catncccaat	gtntgctnga	ngctctgncc	tgcnttangt	tcggtcctgg	540
gaagacctat	caattnaagc	tatgtttctg	actgcctctt	gctccctgna	acaancnacc	600
cnncnntcca	aggggggggnc	ggcccccaat	ccccccaacc	ntnaattnan	tttancccn	660
ccccnggcc	cggcctttta	cnancntcnn	nnacngggna	aaaccnnngc	tttncccaac	720
nnaatccncc	t					731

<210> 20  
 <211> 754  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(754)  
 <223> n = A,T,C or G

<400> 20						
tttttttttt	tttttttttt	taaaaacccc	ctccattnaa	tgnaaacttc	cgaaattgtc	60
caacccccctc	ntccaaatnn	ccntttccgg	gnngggggttc	caaacccean	ttanntttgg	120
annttaaatt	aaatnttntt	tgngngnnna	anccnaatgt	nangaaagtt	naaccanta	180
tnancttnaa	tnccctggaaa	ccngtngntt	ccaaaaatnt	ttaaccctta	antccctccg	240
aaatngttna	nggaaaaccc	aantttctct	aaggttggtt	gaaggntnaa	tnaaaaanccc	300
nnccaattgt	ttttngccac	gcctgaatta	attggnntcc	gntgttttcc	nttaaaanaa	360
ggnnancccc	ggttantnaa	tccccccnnc	cccaattata	ccganttttt	ttngaattgg	420
gancccnccg	gaattaacgg	ggnnnnntccc	tnntgggggg	cnggnncccc	ccccntcggg	480
ggttngggnc	aggnncnaat	tgtttaaggg	tccgaaaaat	ccctccnaga	aaaaaanctc	540
ccaggntgag	nntnggggtt	nccccccccc	canggccctt	ctcgnaagtt	tgggggttgg	600
ggggcctggg	atttnttttc	ccctnttncc	tccccccccc	ccngggganag	aggttngngt	660
tttgntcnnc	ggecccnccn	aaganccttn	ccganttnan	ttaaatecnt	gcctnggcga	720
agtcnttgn	agggntaaan	ggccccctnn	cggg			754

<210> 21  
 <211> 755  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(755)  
 <223> n = A,T,C or G

<400> 21						
atcancccat	gaccccnac	nngggaccnc	tcancgggnc	nnncnaccnc	cggccnatca	60
nngtnagnnc	actncnnttn	natcacnccc	cnccnactac	gcccncnanc	cnacgcncta	120
nncanattnc	actganngcg	cgangtngan	ngagaaaant	nataccanag	ncaccanacn	180
ccagctgtcc	nanaangcct	nnnatacngg	nnnatccaat	ntgnancctc	cnaagtattn	240
nncnncanac	gattttcctn	anccgattac	ccntncccc	tanccctcc	cccccaacna	300
cgaaggcnct	ggncnnaagg	nngcgnccnc	ccgctagntc	cccnncnaagt	cncnnccta	360
aactcanccn	nattacncgc	ttcntgagta	tcactccccg	aatctcaccc	tactcaactc	420
aaaaanatch	gatacaaaat	aatncaagcc	tgnttatnac	actntgactg	ggtctctatt	480
ttagnngtcc	ntnaancntc	ctaatacttc	cagtcnccct	tcnccaattt	ccnaanggct	540
ctttcngaca	gcatnttttg	gttcccnntt	gggttcttan	ngaattgcc	ttcntngaac	600
gggctcntct	tttccctcgg	ttanccctgg	ttcncccggc	cagttattat	ttcccnnttt	660
aaattcntnc	cntttanttt	tggcnttcna	aacccccggc	cttgaaaacg	gccccctggg	720
aaaaggttgt	tttganaaaa	ttttgttttt	gttcc			755

<210> 22  
 <211> 849  
 <212> DNA

<213> Homo sapien

<220>

<221> misc\_feature

<222> (1)...(849)

<223> n = A,T,C or G

<400> 22

tttttttttt	tttttangtg	tngtcgtgca	ggtagaggct	tactacaant	gtgaanacgt	60
acgctnggan	taangcgacc	cgantttctag	gannncncct	aaaatcanac	tgtgaagatn	120
atcctgnnna	cggaanggtc	accggnggat	nntgctaggg	tgncncctcc	cannncnttn	180
cataactcng	nggccctgcc	caccaccttc	ggcgccccng	ngnccggggcc	cgggtcattn	240
gnnttaaccn	cactnngcna	ncggtttccn	nccccnncng	accnnggcga	tccgggggtnc	300
tctgtcttcc	cctgnagncn	anaaantggg	ccncggncce	ctttaccctt	nnacaagcca	360
cngccntcta	ncncngccc	cccctccant	nngggggact	gccnanngct	ccgttncntg	420
nnaccccnnn	gggtncctcg	gttgctcgant	cnaccgnang	ccanggatcc	cnaaggaagg	480
tgcgttnttg	gccctacccc	ttcgtncngg	nncacccttc	ccgacnanga	nccgctcccc	540
cncnncgngg	cctcncctcg	caacaccccg	netentcngt	ncggnnnccc	ccccaccgcg	600
ncctcncnc	ngncgnancn	ctcncncnc	gtctcannca	ccaccccgcc	ccgccaggcc	660
ntcanccaen	ggnggacnng	nagcncnttc	gcncgcgcgn	gcgncncctt	cgccncngaa	720
ctncntcngg	ccantnnccg	tcaancnna	cnaaacgcgc	ctgcgcggcc	cgnagcgncc	780
ncctccncca	gtcctcccgn	cttcnacc	angnttccn	cgaggacacn	nnaccccgcc	840
nncangcgg						849

<210> 23

<211> 872

<212> DNA

<213> Homo sapien

<220>

<221> misc\_feature

<222> (1)...(872)

<223> n = A,T,C or G

<400> 23

gcgcaaaacta	tacttcgctc	gnactcgtgc	gcctcgtcnc	tcttttccctc	cgcaaccatg	60
tctgacnanc	ccgattnggc	ngatatonan	aagntcganc	agtccaaact	gantaacaca	120
cacacncnan	aganaaatcc	nctgccttcc	anagtanacn	attgaacnng	agaaccangc	180
nggcgaatcg	taatnaggcg	tgcgcgcgca	atntgtcnc	gtttattntn	ccagcncnc	240
ctnccnacc	tacntcttcn	nagetgtcnn	accctngtn	cgnaccccc	naggtcgga	300
tgggttttn	nntgaccng	cnnccctcc	ccccctccat	nacganccnc	ccgcaccacc	360
nanngcncgc	nceccgnnet	cttcgcnc	ctgtcctntn	cccctgtngc	ctggcncngn	420
accgcattga	ccctcgcenn	ctncnngaaa	ncgnanacgt	ccgggttggn	annancgctg	480
tgggnnngcg	tctgcncgc	gttccttcn	ncncttcca	ccatcttct	tacnggggtc	540
ccncgcctc	tcnnncacnc	cctgggaagc	tnctcctntg	cccccttnac	tccccccctt	600
cgncgtgncc	cgnccccacc	ntcatttnca	nacgntcttc	acaannncct	ggntnnetcc	660
cnancngncn	gtcanccnag	ggaagggngg	ggnnccnntg	nttgacgttg	nggngangtc	720
cgaanantcc	tcnccntcan	cncctaccct	cgggcggnct	ctcngttnc	aacttancaa	780
ntctcccccg	ngngcncntc	tcagcctcnc	ccncccnct	ctctgcantg	tnctctgctc	840
tnaccnntac	gantnttcgn	cncctcttt	cc			872

<210> 24

<211> 815

<212> DNA

<213> Homo sapien

<220>

<221> misc\_feature

<222> (1)...(815)

<223> n = A,T,C or G

<400> 24

gcatgcaagc	ttgagtattc	tatagngtca	cctaaatanc	ttggcntaat	catgggtcnta	60
nctgncttcc	tgtgtcaaat	gtatacnaan	tanatatgaa	tctnatntga	caaganngta	120
tcntncatta	gtaacaantg	tnntgtccat	cctgtcngan	canattccca	tnnattncgn	180
cgcattcncn	gcncantatn	taatngggaa	ntcnntnnnn	ncaccnnncat	ctatcntncc	240
gcncctgac	tgganagat	ggatnanttc	tnntntgacc	nacatgttca	tcttggtatn	300
aanancccc	cgcngnccac	cggttngnng	cnagccnntc	ccaagacctc	ctgtggaggt	360
aacctgcgtc	aganncatca	aacntgggaa	acccgcnncc	angtnnaagt	ngnnncanan	420
gatccccgtc	aggnttnacc	atcccttcnc	agcgccccct	ttngtgcctt	anagngnagc	480
gtgtccnanc	cnetcaacat	ganacgcgcc	agnccanccg	caattnggca	caatgtcnc	540
gaaccccccta	gggggantna	tncaaancce	caggattgtc	cncncangaa	atcccnanc	600
ccnccctac	ccncttttg	gacngtgacc	aantcccgga	gtncacgtcc	ggcngnctc	660
ccccaccggt	nnccttggg	gggtgaanct	cngnntcanc	cngncgaggn	ntcgnaagga	720
accggnccctn	gngcgaanng	ancnntcnga	agngccnct	cgtataaccc	cccctcncca	780
nccnacngnt	agntcccccc	cngggtncgg	aangg			815

&lt;210&gt; 25

&lt;211&gt; 775

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(775)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 25

ccgagatgtc	tcgctccgtg	gccttagctg	tgtctgcgct	actctctctt	tctggcctgg	60
aggctatcca	gcgtactcca	aagattcagg	tttactcacg	tcacccagca	gagaatggaa	120
agtcaaattt	cctgaattgc	tatgtgtctg	ggtttcatcc	atccgacatt	gaanttgact	180
tactgaagaa	tgganagaga	attgaaaaag	tggagcattc	agacttgtct	ttcagcaagg	240
actgggtctt	ctatctcntg	tactacactg	aattcacccc	caactgaaaa	gatgagtatg	300
cctgcccgtg	gaaccatgtg	actttgtcac	agcccaagat	agttaagtgg	gatcgagaca	360
tgtaagcagn	cnnccatggaa	gtttgaagat	gccgcatttg	gattggatga	attccaaatt	420
ctgcttgctt	gcnttttaat	antgatatgc	ntatacaccc	taccctttat	gncccccatt	480
tgtaggggtt	acatnantgt	tcnctnngga	catgatcttc	ctttataant	ccnccnttcg	540
aattgcccgt	cncnngttn	ngaattgttc	cnaaaccacg	gttgggtccc	ccaggtcncc	600
tcttacggaa	gggcctgggc	cncctttncaa	ggttggggga	accnaaaatt	tcncttntgc	660
ccncccncca	cnncttngn	nncncanttt	ggaacccttc	cnattcccct	tggcctcnna	720
nccttnncta	anaaaacttn	aaancgtngc	naaanntttt	acttcccccc	ttacc	775

&lt;210&gt; 26

&lt;211&gt; 820

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(820)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 26

anattantac	agtgtaatct	tttcccagag	gtgtgtanag	ggaacggggc	ctagaggcat	60
cccanagata	ncttatanca	acagtgtctt	gaccaagagc	tgctgggcac	atttccctgca	120
gaaaagggtg	cgggtcccat	cactcctcct	ctcccatagc	catcccagag	gggtgagtag	180
ccatcangcc	ttcgggtggga	gggagtcang	gaaacaacan	accacagagc	anacagacca	240
ntgatgacca	tgggcgggag	cgagcctctt	ccctgnaccg	gggtggcana	nganagccta	300
nctgaggggt	cacactataa	acgttaacga	ccnagatnan	cacctgcttc	aagtgcaccc	360
ttcctacctg	acnaccagn	accnnaact	gcngcctggg	gacagcnetg	ggancagcta	420
acnnagcact	cacctgcccc	cccatggccg	tnccntccc	tggtcctgnc	aagggaaagt	480
ccctgttgga	attncgggga	naccaaggga	nccccctcct	ccanctgtga	aggaaaaann	540
gatggaattt	tncccttccg	gccnntcccc	tcttcttcta	cacgccccct	ntactcntc	600
tccctctntt	ntcctgncnc	acttttnacc	ccnnnatttc	ccttnattga	tccgannctn	660

ganattccac tnnccctnc cntcnatcng naanacnaaa nactntctna ccnnggggat 720  
 gggnnccctcg ntcacccctct ctttttctnct accnccnntt ctttgccctct ccttngatca  
 780tccaaccntc gntggccntn cccccccnnn tccttttccc  
 820

<210> 27  
 <211> 818  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(818)  
 <223> n = A,T,C or G

<400> 27  
 tctgggtgat ggcctcttcc tcctcagga cctctgactg ctctgggcca aagaatctct 60  
 tgtttcttct ccgagcccca ggcagcgggtg attcagccct gcccaacctg attctgatga 120  
 ctgaggatgc tgtgacggac ccaaggggca aatagggtcc cagggtccag ggagggggcg 180  
 ctgctgagca cttccgcccc tcaccctgcc cagccccctgc catgagctct gggctgggtc 240  
 tccgctcca gggttctgct cttccangca ngccancaag tggcgtctgg ccacactggc 300  
 ttcttctgc cccntccctg gctctganc tctgtcttcc tgtcctgtgc angcnccttg 360  
 gatctcagtt tccctcctc anngaactct gtttctgann tcttcantta actntgantt 420  
 tatnaccnan tggncgtgnc tgtcnnactt taatgggcn gaccggctaa tccctccctc 480  
 nctcccttcc anttcnnna accngcttnc cntctctcc ccntancccg ccnggggaanc 540  
 ctcctttgcc ctnaccangg gccnnnaccg cccntnnctn gggggggcng gttnctnenc 600  
 ctgntnnccc cncctcncnt tncctcgctc cncnncgcn nngcannntc nngtcccn 660  
 tnnctctten ngntcgnaa ngntcncntn tnnnnngcn ngntnntn tccctctcnc 720  
 cnnntgnang tnnntnnnc ncngncccc nnnnnnnnn nggnntnnn tctnncngc 780  
 cccnncccc ngnattaagg cctccnntct ccggccnc 818

<210> 28  
 <211> 731  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(731)  
 <223> n = A,T,C or G

<400> 28  
 aggaagggcg gagggatatt gtangggatt gagggatagg agnataangg gggaggtgtg 60  
 tcccaacatg anggtgnggt tctcttttga angaggggtg ngtttttann ccnggtgggt 120  
 gattnaaccc cattgtatgg agnnaaaggn ttttagggat ttttcggctc ttatcagtat 180  
 ntanattcct gtnaatcgga aaatnatntt tcnnccggaa aatnttgctc ccatccgnaa 240  
 attnctccc ggtagtgcatt nttngggggn cngccangtt tcccaggctg ctanaatcgt 300  
 actaaagntt naagtgggan tncaaatgaa aacctnnac agagnatccn taccgactg 360  
 tnnnttncct tcgcccctng actctgcng agcccaatac ccngngnat gtcnccngn 420  
 nnngcgnnc tgaaannnc tcgnggctnn gancatcang gggtttcgca tcaaaagcnn 480  
 cgtttcncat naaggcactt tngcctcacc caaccnctng ccctcnncca tttngccgctc 540  
 nggttncct acgctnnntg cncctnnntn ganattttnc ccgctnggg naancctcct 600  
 gnaatgggta gggnccttnc ttttnaccnn gnggtntact aatcnnctnc acgctnctt 660  
 tctcnacccc ccccttttt caatcccanc ggcnaatggg gtctccccnn cgangggggg 720  
 nnnccannc c 731

<210> 29  
 <211> 822  
 <212> DNA  
 <213> Homo sapien

<220>

<221> misc\_feature  
 <222> (1)...(822)  
 <223> n = A,T,C or G

<400> 29  
 actagtccag tgtggtggaa ttccattgtg ttggggncnc ttctatgant antnttagat 60  
 cgctcanacc tcacancctc ccnancngc ctataangaa nannaataga nctgtncnnt 120  
 atntntacnc tcatanncct cnnnacccac tccctcttaa cccntactgt gcctatngcn 180  
 tnnctantct ntggcgctn cnanccaccn gtgggcecnac cncnngnatt ctcnatctcc 240  
 tcnccatntn gcctananta ngtncatacc ctatacctac nccaatgcta nnnctaancn 300  
 tccatnantt annntaacta ccactgacnt ngactttcnc atnanctcct aatttgaatc 360  
 tactctgact cccacngcct annnattagc ancntcccc nacnatntct caaccaaacc 420  
 ntcaacaacc tatctanctg ttcnccaacc nttncctcgc atccccnnac aacccccctc 480  
 ccaaataccc nccacctgac ncctaaccn caccatcccc gcaagccnan ggnacatttan 540  
 ccactggaaat cacnatngga naaaaaaaaaac ccnaactctc tancncnnat ctccctaana 600  
 aatnctcctn naatttactn ncantnccat caancccaen tgaaacnnaa cccctgtttt 660  
 tanatccctt ctttcgaaaa ccnacccttt annncccaac ctttngggcc ccccnctnc 720  
 ccnaatgaag gncnccaat cnangaaag nccntgaaaa ancnaggcna anannntccg 780  
 canatcctat cccttanttn ggggncctt nccngggcc cc 822

<210> 30  
 <211> 787  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(787)  
 <223> n = A,T,C or G

<400> 30  
 cggcgcgctg ctctggcaca tgcctcctga atggcatcaa aagtgatgga ctgcccattg 60  
 ctagagaaga ctttctctcc tactgtcatt atggagccct gcagactgag ggctcccctt 120  
 gtctgcagga tttgatgtct gaagtcgtgg agtgtggctt ggagctcctc atctacatna 180  
 gctggaagcc ctggaggggc tctctcgcca gcctccccct tctctccacg ctctccangg 240  
 acaccagggg ctccaggcag cccattattc ccagnangac atgggtgtttc tccacgcgga 300  
 cccatggggc ctgnaaggcc agggctcctt ttgacaccat ctctcccgtc ctgcttgga 360  
 ggcggtggga tccactantt ctanaacggc cgccaccncc gtgggagctc cagcttttgt 420  
 tcccnttaat gaaggttaat tgcncgcttg gcgtaatcat nggtcanaac tntttcctgt 480  
 gtgaaattgt ttntccccct ncnattccnc ncnacatacn aaccgggaan cataaagtgt 540  
 taaagcctgg gggtngcctn nngaattnaac tnaactcaat taattgcgtt ggctcatggc 600  
 ccgctttccn ttngggaaaa ctgtcntccc ctgcnttntt gaatcgggca ccccccnggg 660  
 aaaagcggtt tgcnttttng ggggntcctt ccncttcccc cctcnctaan cccctnccct 720  
 cggtcgttnc nggtngcggg gaanggggnat nnnctccnc naagggggng agnnngntat 780  
 ccccaaa 787

<210> 31  
 <211> 799  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(799)  
 <223> n = A,T,C or G

<400> 31  
 tttttttttt tttttttggc gatgctactg tttaattgca ggaggtgggg gtgtgtgtac 60  
 catgtaccag ggctattaga agcaagaagg aaggaggagg ggcagagcgc cctgctgagc 120  
 aacaaaggac tctgtcagcc ttctctgtct gtctcttggc gcaggcacat ggggaggcct 180  
 cccgcagggt gggggccacc agtccagggg tgggagcact acanggggtg ggagtgggtg 240  
 gtggctggtt cnaatggcct gncacanatc cctacgattc ttgacacctg gatttcacca 300

ggggaccttc	tgtttcccca	nggnaacttc	ntnnatctcn	aaagaacaca	actgtttctt	360
cngcanttct	ggctgttcat	ggaaagcaca	ggtgtccnat	ttnggctggg	acttggtaca	420
tatggttccg	gcccacctct	cccntcnaaa	aagtaattca	ccccccccc	ccntctnttg	480
cctgggacct	taantaccca	caccggaact	canttanta	ttcatcttng	gntgggcttg	540
ntnatncn	cctgaangcg	ccaagttgaa	aggccacgcc	gtncnccnctc	cccatagnan	600
nttttncnt	canctaagtc	ccccccnggc	aacnatccaa	tcccccccn	tgggggcccc	660
agcccanggc	ccccgntcg	ggnnncnng	cncgnantcc	ccaggncttc	ccantcngnc	720
ccnnngcncc	cccgacgca	gaacanaagg	ntngagcenc	cgcannnnnn	nggtnnnnc	780
ctcgcccccc	ccnnccgng					799

<210> 32  
 <211> 789  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(789)  
 <223> n = A,T,C or G

<400> 32						
tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	60
tttttccnag	ggcaggttta	ttgacaacct	cncgggacac	aancaggctg	gggacaggac	120
ggcaacaggc	tccggcgccg	gcggcgccg	ccctacctgc	ggtaccaa	ntgcagcctc	180
cgctcccgct	tgatnttctt	ctgcagctgc	aggatgcct	aaaacagggc	ctcgccntn	240
ggtgggcacc	ctgggatttn	aatttccacg	ggcacaatgc	ggtcgcancc	cctcaccacc	300
nattaggaat	agtggnttta	ccnccnccg	ttggcncact	ccccntggaa	accacttntc	360
gcggctccg	catctggtct	taaaccttgc	aaacnctggg	gccctctttt	tggttantnt	420
nccngccaca	atcatnactc	agactggcnc	gggctggccc	caaaaaan	ccccaaaacc	480
ggncatgtc	ttncgggggt	tgctgcnatn	tncatcacct	cccgggcnca	ncaggncaac	540
ccaaaagtgc	ttngggcccn	caaaaaanct	ccggggggnc	ccagtttcaa	caaagtcatc	600
ccccttgcc	cccaaattct	ccccccgntt	ncctgggttg	ggaacccacg	cctctnnctt	660
tggnnggcaa	gntggntccc	ccttcggggc	cccgggtggc	ccnnctctaa	ngaaaacncc	720
ntcctnnnca	ccatcccccc	nngnnacgnc	tancaangna	tccctttttt	tanaaacggg	780
ccccccnccg						789

<210> 33  
 <211> 793  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(793)  
 <223> n = A,T,C or G

<400> 33						
gacagaacat	ggtggatggt	ggagcacctt	tctatacgac	ttacaggaca	gcagatgggg	60
aattcatggc	tgttgagca	atanaacccc	agttctacga	gctgctgac	aaaggacttg	120
gactaaagtc	tgatgaactt	cccaatcaga	tgagcatgga	tgattggcca	gaaatgaana	180
agaagtttgc	agatgtattt	gcaaagaaga	cgaaggcaga	gtggtgtcaa	atctttgacg	240
gcacagatgc	ctgtgtgact	ccggttctga	aggagcagga	ggttgttcat	catgatcaca	300
acaangaacg	gggctcgttt	atcaccantg	aggagcagga	cgtgagcccc	cgccctgcac	360
ctctgctggt	aaacacccca	gccatccctt	ctttcaaaag	ggatccacta	cttctagagc	420
ggncgccacc	gcggtggagc	tccagctttt	gttcccttta	gtgagggtta	attgcgcgct	480
tggcgtaatc	atggtcatan	ctgtttcctg	tgtgaaattg	ttatccgctc	acaattccac	540
acaacatacg	anccggaagc	atnaaatttt	aaagcctggg	ggtngcctaa	tgantgaact	600
nactcacatt	aattggcttt	gcgctcactg	cccgttttcc	agtccggaaa	acctgtcctt	660
gccagctgcc	nttaatgaat	cnggccaccc	cccggggaaa	aggcngtttg	cttnttgggg	720
cgccttccc	gctttctcgc	ttcctgaant	ccttcccccc	ggtctttcgg	cttgcggcna	780
acgggtatona	cct					793



<210> 34  
 <211> 756  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(756)  
 <223> n = A,T,C or G

<400> 34

gccgcgaccg	gcatgtacga	gcaactcaag	ggcgagtggg	accgtaaaaag	ccccaatctt	60
ancaagtgcg	gggaanagct	gggtcgactc	aagctagttc	ttctggagct	caacttcttg	120
ccaaccacag	ggaccaagct	gaccaaacag	cagctaattc	tggcccgtga	catactggag	180
atcgggggcc	aatggagcat	cctacgcaan	gacatcccct	ccttcgagcg	ctacatggcc	240
cagctcaaat	gctactactt	tgattacaan	gagcagctcc	ccgagtcagc	ctatatgcac	300
cagctcttgg	gcctcaacct	cctcttctctg	ctgtcccaga	accgggtggc	tgantnccac	360
acgganttgg	ancggctgcc	tgcccaanga	catacanacc	aatgtctaca	tcnaccacca	420
gtgtcctgga	gcaatactga	tgganggcag	ctaccncaaa	gtnttcctgg	ccnagggtaa	480
catccccccg	cgagagctac	accttcttca	ttgacatcct	gtcgcgacct	atcagggatg	540
aaaatcgcn	ggttgctcca	gaaaggctnc	aanaanatcc	ttttnctga	aggcccccg	600
atncnctagt	nctagaatcg	gcccggccatc	gcggtgganc	ctccaacctt	tcgttnccct	660
ttactgaggg	ttnatgtccg	cccttggcgt	tatcatggtc	acnccngttn	cctgtgttga	720
aattnttaac	cccccaaat	tccacgcena	cattn			756

<210> 35  
 <211> 834  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(834)  
 <223> n = A,T,C or G

<400> 35

ggggatctct	anatchnacct	gnatgcatgg	ttgtcggtgt	ggtcgctgtc	gatgaanatg	60
aacaggatct	tgcccttgaa	gctctcggtc	gctgtnttta	agttgctcag	tctgccgtca	120
tagtcagaca	cnctcttggg	caaaaaacan	caggatntga	gtcttgattt	cacctccaat	180
aatcttcngg	gctgtctgct	cggtgaactc	gatgacnang	ggcagctggg	tgtgtntgat	240
aaantccanc	angttctcct	tggtgacctc	cccttcaaag	ttgttccggc	cttcatcaaa	300
cttctnnaan	angannancc	canctttgtc	gagctggnat	ttgganaaca	cgtcactggt	360
ggaaactgat	cccaaagtgt	atgtcatcca	tcgcctctgc	tgccctgcaa	aaacttgctt	420
ggcncaaatc	cgactcccn	tccttgaaag	aagccnatca	cacccccctc	cctggactcc	480
nncaangact	ctnccgctnc	cccntccnng	cagggttggg	ggcannccgg	gcccgtgcgc	540
ttcttcagcc	agttcacnat	nttcatcagc	ccctctgcca	gctgttntat	tccttggggg	600
ggaanccgtc	tctcccttcc	tgaannaact	ttgaccgtng	gaatagccgc	gcntcnccnt	660
acntnctggg	ccgggttcaa	antccctccn	ttgncnntcn	cctcgggcca	ttctggattt	720
nccnaacttt	ttccttcccc	cnccccncgg	ngtttggnnt	tttcatnggg	ccccaactct	780
gctnttggcc	antcccttgg	gggcntntan	cnccccctnt	ggtcccntng	ggcc	834

<210> 36  
 <211> 814  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(814)  
 <223> n = A,T,C or G

<400> 36

cggnccgcttt	ccngccgcgc	cccgtttcca	tgacnaaggc	tcccttcang	ttaaatacnn	60
cctagnaaac	attaatgggt	tgctctacta	atacatcata	cnaaccagta	agcctgcccc	120
naacgccaac	tcaggccatt	cctaccaaag	gaagaaaggc	tggtctctcc	accccctgta	180
ggaaaggcct	gccttgtaag	acaccacaat	ncggctgaat	ctnaagtctt	gtgttttact	240
aatggaaaaa	aaaaataaac	aanaggtttt	gttctcatgg	ctgcccaccg	cagcctggca	300
ctaaaacanc	ccagcgctca	cttctgcttg	ganaaatatt	ctttgctctt	ttggacatca	360
ggcttgatgg	tatcactgcc	acntttccac	ccagctgggc	ncccttcccc	catntttgtc	420
antganctgg	aaggcctgaa	ncttagtctc	caaaagtctc	ngcccacaag	accggccacc	480
aggggagntc	ntttncagtg	gatctgccaa	anantaccn	tatcatcnnt	gaataaaaag	540
gcccctgaac	ganatgcttc	cancancctt	taagacccat	aatcctngaa	ccatgggtgcc	600
cttccgggtct	gatccnaaag	gaatgttcc	gggtcccant	ccctcctttg	tttcttacgt	660
tgtnttgac	cctgtctnng	atnaccnaan	tganatcccc	ngaagcacc	tnccctggc	720
atttganttt	cntaaattct	ctgccctacn	nctgaaagca	cnattccctn	ggcncnnaan	780
gngaaactca	agaaggctcn	ngaaaaacca	cncn			814

<210> 37  
 <211> 760  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(760)  
 <223> n = A,T,C or G

<400> 37	
gcattgctgct	cttccctcaaa gttgttcttg ttgccataac aaccaccata ggtaaagcgg 60
gcgcagtgtt	cgctgaagg gttgtagtac cagcgcgga tgctctcctt gcagagtcct 120
gtgtctggca	ggtccacgca atgccctttg tcaactggga aatggatgcg ctggagctcg 180
tcaanccac	tcgtgtattt ttcacangca gcctcctccg aagctccgg gcagttgggg 240
gtgtcgtcac	actccactaa actgtcgatn cancagccca ttgctgcagc ggaactgggt 300
gggtgacag	gtgccagaac acactggatn ggcttttcca tggaaaggcc tgggggaaat 360
cncctnancc	caaactgcct ctcaaaggcc accttgaca ccccgacagg ctagaaatgc 420
actcttcttc	ccaaaggtag ttgttcttgg tgcccaagca ncctccanca aaccaaanc 480
ttgcaaaact	tgctccgtgg gggatcatnn taccanggtt ggggaaanaa acccgcnngn 540
ganccnctt	gtttgaatgc naaggnaata atcctcctgt cttgcttggg tgggaanagca 600
caattgaact	gttaacnttg ggccnggttc cncnnggtg gtctgaaact aatcacgcgc 660
actggaaaaa	ggtangtgcc ttccttgaat tcccaaantt cccctngntt tgggtntttt 720
ctcctctncc	ctaaaaatcg tnttcccccc cntanggcg 760

<210> 38  
 <211> 724  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(724)  
 <223> n = A,T,C or G

<400> 38	
tttttttttt	tttttttttt tttttttttt tttttaaaaa cccctccat tgaatgaaaa 60
cttcnnaaat	tgtccaaccc cctcnccaa atnnccattt ccgggggggg gttccaaacc 120
caaattaatt	ttgganttta aattaaatnt tnatnngggg aanaanccaa atgtnaagaa 180
aatttaaccc	attatnaact taaatnccn gaaacccntg gnttccaaa atttttaacc 240
cttaaatccc	tccgaaattg ntaanggaaa accaaattcn cctaaggctn tttgaagggt 300
ngatttaaac	ccccttnant tnttttnacc cnnngctnaa ntatttngnt tccggtgttt 360
tcctnttaan	cntnggtaac tcccgnatga gaannnccct aanccaatta aaccgaattt 420
tttttgaatt	ggaaattccn ngggaattna ccgggggttt tcccttttgg gggccatncc 480
ccnctttcg	gggtttgggn ntaggttgaa ttttttnang nccccaaaaa ncccccaana 540
aaaaaactcc	caagnnttaa ttngaantnc ccccttccca ggccttttgg gaaaggnggg 600
ttnttggggg	ccngggantt ontcccccc ttnccncccc cccccnggt aaanggttat 660

ngnnttttggg ttttgggccc cttnanggac cttccggatn gaaattaaat ccccgggncg 720  
gccg 724

<210> 39  
<211> 751  
<212> DNA  
<213> Homo sapien  
  
<220>  
<221> misc\_feature  
<222> (1)...(751)  
<223> n = A,T,C or G

<400> 39  
tttttttttt tttttctttg ctcacattta atttttattt tgattttttt taatgctgca 60  
caacacaata tttatttcat ttgtttcttt tatttcattt tatttgtttg ctgctgctgt 120  
tttattttatt tttactgaaa gtgagaggga acttttgggg ccttttttcc tttttctgta 180  
ggccgcctta agctttctaa atttggaaca tctaagcaag ctgaanggaa aaggggggtt 240  
cgcaaaatca ctggggggaa nggaaagggt gctttgttaa tcatgcccta tgggtgggtga 300  
ttaactgctt gtacaattac ntctacttt taattaattg tgctnaangc ttttaattana 360  
cttgggggtt cctcccccac accaacccon .ctgacaaaaa gtgccngccc tcaaantatg 420  
tcccggcnnt cnttgaaaca cacngcngaa ngttctcatt ntcccccncnc caggtnaaaa 480  
tgaagggtta ccatntttta cncacactcc acntggcnnn gcctgaatcc tcnaaaancn 540  
ccctcaancn aattnctnng ccccggtcnc gcntnngtcc cncccgggt cggggaantn 600  
cacccccnga anncnntnnc naacnaaatt ccgaaaatat tcccnntcnc tcaattcccc 660  
cnnagactnt cctcnncnan cncaatttcc ttttnntcac gaacncgnnc cnnaaatgn 720  
nnnncnctc cnetngtccn naatcnccan c 751

<210> 40  
<211> 753  
<212> DNA  
<213> Homo sapien  
  
<220>  
<221> misc\_feature  
<222> (1)...(753)  
<223> n = A,T,C or G

<400> 40  
gtggtatttt ctgtaagatc aggtgttccct ccctcgtagg tttagaggaa acaccctcat 60  
agatgaaaac ccccccgaga cagcagcact gcaactgcc aagcagccgg gtaggagggg 120  
cgccctatgc acagctgggc ccttgagaca gcagggttc gatgtcaggc tcgatgtcaa 180  
tggtctggaa gcggcggtg tacctgcgta ggggcacacc gtcaggggccc accaggaact 240  
tctcaaagtt ccaggcaacn tcgttgcgac acaccggaga ccagggtgatn agcttgggggt 300  
cggtcataan cgcggtggcg tcgtcgctgg gagctggcag ggccctcccgc aggaaggcna 360  
ataaaagggt cgcccccgca ccgttcanct cgcacttctc naanaccatg angttgggct 420  
cnaaccacc accannccgg acttccctga nggaattccc aaatctcttc gntcttgggc 480  
ttctnctgat gccctanctg gttgcccnng atgccaanca nccccaancc ccggggtcct 540  
aaanaccn cctcctcntt tcatctgggt tntntcccc ggaccntgg tccctcaag 600  
ggancccata tctcnaccan tactcacnt nccccccnt gnnaccanc cttctanngn 660  
ttccncccg ncctctggcc cntcaaan gttncacna cctgggtctg cttcccccc 720  
tnccctatct gnaccnncn tttgtctcan tnt 753

<210> 41  
<211> 341  
<212> DNA  
<213> Homo sapi n

<400> 41  
actatatcca tcacaacaga catgcttcat cccatagact tcttgacata gcttcaaagt 60  
agtgaaccca tccttgattt atatacatat atgttctcag tattttggga gcctttccac 120  
ttctttaaac cttgttcatt atgaacactg aaaataggaa tttgtgaaga gttaaaaagt 180

tatagcttgt	ttacgtagta	agtttttgaa	gtctacattc	aatccagaca	cttagttgag	240
tgttaaactg	tgatttttaa	aaaatatcat	ttgagaatat	tctttcagag	gtattttcat	300
ttttactttt	tgattaattg	tgttttatat	attagggtag	t		341

<210> 42  
 <211> 101  
 <212> DNA  
 <213> Homo sapien

<400> 42						
acttactgaa	tttagttctg	tgctcttcct	tatttagtgt	tgtatcataa	atactttgat	60
gtttcaaaca	ttctaaataa	ataattttca	gtggcttcac	a		101

<210> 43  
 <211> 305  
 <212> DNA  
 <213> Homo sapien

<400> 43						
acatctttgt	tacagtctaa	gatgtgttct	taaatcacca	ttccttcctg	gtcctcaccc	60
tccagggtgg	tctcacactg	taattagagc	tattgaggag	tctttacagc	aaattaagat	120
tcagatgcct	tgctaagtct	agagttctag	agttatgttt	cagaaagtct	aagaaaccca	180
cctcttgaga	ggtcagtaaa	gaggacttaa	tatttcacat	ctacaaaatg	accacaggat	240
tgatacaga	acgagagtta	tcctggataa	ctcagagctg	agtacctgcc	cggggggccgc	300
tcgaa						305

<210> 44  
 <211> 852  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)... (852)  
 <223> n = A,T,C or G

<400> 44						
acataaatat	cagagaaaag	tagtctttga	aatattttacg	tccaggagtt	ctttgtttct	60
gattatttgg	tgtgtgtttt	ggtttgtgtc	caaagtattg	gcagcttcag	ttttcatttt	120
ctctccatcc	tcgggcattc	ttcccaaatt	tatataccag	tcttcgtcca	tccacacgct	180
ccagaatttc	tctttttag	taatatctca	tagctcggct	gagcttttca	taggtcatgc	240
tgctgttgtt	cttcttttta	ccccatagct	gagccactgc	ctctgatttc	aagaacctga	300
agacgccctc	agatcggctc	tcccatttta	ttaatcctgg	gttcttgtct	gggttcaaga	360
ggatgtcgcg	gatgaattcc	cataagttag	tccctctcgg	gttgtgcttt	ttggtgtggc	420
acttggcagg	ggggtcctgc	tcctttttca	tatcagggtga	ctctgcaaca	ggaaggtgac	480
tggtggttgt	catggagatc	tgagcccggc	agaaagtttt	gctgtccaac	aaatctactg	540
tgctaccata	gttggtgtca	tataaatagt	tctngtcttt	ccagggtgtc	atgatggaag	600
gctcagtttg	ttcagtcttg	acaatgacat	tgtgtgtgga	ctggaacagg	tcactactgc	660
actggccgtt	ccacttcaga	tgctgcaagt	tgctgtagag	gagntgcccc	gccgtccctg	720
ccgcccgggt	gaactcctgc	aaactcatgc	tgcaaagggtg	ctcgccgttg	atgtcgaaact	780
cntggaaagg	gatacaattg	gcatccagct	ggttggtgtc	caggaggtga	tggagccact	840
cccacacctg	gt					852

<210> 45  
 <211> 234  
 <212> DNA  
 <213> Homo sapien

<400> 45						
acaacagacc	cttgctcgct	aacgacctca	tgctcatcaa	gttggacgaa	tccgtgtccg	60
agtctgacac	catccggagc	atcagcattg	cttcgcagtg	ccctaccgcg	gggaactctt	120
gcctcgtttc	tggtctgggt	ctgctggcga	acggcagaat	gcctaccgtg	ctgcagtgcg	180

tgaacgtgtc ggtggtgtct gaggaggtct gcagtaagct ctatgacccg ctgt 234

<210> 46  
 <211> 590  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(590)  
 <223> n = A,T,C or G

<400> 46  
 acttttttatt taaatgttta taaggcagat ctatgagaat gatagaaaac atggtgtgta 60  
 atttgatagc aatatttttg agattacaga gtttttagtaa ttaccaatta cacagttaaa 120  
 aagaagataa tatattccaa gcanatacaa aatatctaata gaaagatcaa ggcaggaaaa 180  
 tgantataac taattgacaa tggaaaatca attttaaatgt gaattgcaca ttatccttta 240  
 aaagctttca aaanaanaaa ttattgcagt ctanttaatt caaacagtgt taaatggtat 300  
 caggataaan aactgaaggg canaaaagaat taattttcac ttcatgtaac ncacccanatt 360  
 ttacaatggc ttaaatgcan ggaaaaagca gtggaagtag ggaagtantc aaggtctttc 420  
 tggctctctaa tctgccttac tctttgggtg tggctttgat cctctggaga cagctgccag 480  
 ggctcctgtt atatccacaa tcccagcagc aagatgaagg gatgaaaaag gacacatgct 540  
 gccttccttt gaggagactt catctcactg gccaacactc agtcacatgt 590

<210> 47  
 <211> 774  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(774)  
 <223> n = A,T,C or G

<400> 47  
 acaagggggc ataatgaagg agtgggggana gatttttaaag aaggaaaaaa aacgaggccc 60  
 tgaacagaat ttctctgnac aacggggcctt caaaataatt ttcttgggga ggttcaagac 120  
 gcttcaactgc ttgaaactta aatggatgtg ggacanaatt ttctgtaatg accctgaggg 180  
 cattacagac gggactctgg gaggaaggat aaacagaaaag gggacaaaagg ctaatcccaa 240  
 aacatcaaag aaaggaagggt ggcgtcatatc ctcccagcct acacagttct ccagggtctt 300  
 cctcatcctt ggaggacgac agtggaggaa caactgacca tgtccccagg ctcctgtgtg 360  
 ctggctcctt gtcttcagcc cccagctctg gaagcccacc ctctgctgat cctgcgtggc 420  
 ccacactcct tgaacacaca tcccaggtt atattcctgg acatggctga acctcctatt 480  
 cctacttccg agatgccttg ctccctgcag cctgtcaaaa tcccactcac cctccaaacc 540  
 acggcatggg aagcctttct gacttgcttg attactccag catcttgga caatccctga 600  
 ttccccactc cttagaggca agataggggtg gttaagagta gggctggacc acttgagacc 660  
 aggtctgtgg cttcaaattt tggctcattt acgagctatg ggaccttggg caagtnatct 720  
 tcacttctat gggcntcatt ttgttctacc tgcaaaatgg ggataataa tagt 774

<210> 48  
 <211> 124  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(124)  
 <223> n = A,T,C or G

<400> 48  
 canaaattga aattttataa aaaggcattt ttctottata tccataaaat gatataattt 60  
 ttgcaantat anaaatgtgt cataaattat aatgttcctt aattacagct caacgcaact 120

tggt

124

<210> 49  
 <211> 147  
 <212> DNA  
 <213> Homo sapien  
  
 <220>  
 <221> misc\_feature  
 <222> (1)...(147)  
 <223> n = A,T,C or G

&lt;400&gt; 49

gccgatgcta ctattttatt gcaggaggtg ggggtgtttt tattattctc tcaacagctt 60  
 tgtggctaca ggtgggtgtct gactgcatna aaaanttttt tacgggtgat tgcaaaaatt 120  
 ttagggcacc catatcccaa gcantgt 147

<210> 50  
 <211> 107  
 <212> DNA  
 <213> Homo sapien

&lt;400&gt; 50

acattaaatt aataaaagga ctggtggggt tctgctaaaa cacatggctt gatattattgc 60  
 atggttttgag gttaggagga gttaggcata tgttttggga gaggggt 107

<210> 51  
 <211> 204  
 <212> DNA  
 <213> Homo sapien

&lt;400&gt; 51

gtccataggaa gtctagggga cacacgactc tggggtcacg gggccgacac acttgacagg 60  
 cgggaaggaa aggagagaa gtgacaccgt cagggggaaa tgacagaaag gaaaatcaag 120  
 gccttgcaag gtcagaaagg ggactcaggg cttocaccac agccctgccc cacttggcca 180  
 cctccctttt gggaccagca atgt 204

<210> 52  
 <211> 491  
 <212> DNA  
 <213> Homo sapien

&lt;220&gt;

<221> misc\_feature  
 <222> (1)...(491)  
 <223> n = A,T,C or G

&lt;400&gt; 52

acaaagataa catttatctt ataacaaaaa tttgatagtt ttaaagggtta gtatttgtta 60  
 gggatatttc caaaagacta aagagataac tcaggtaaaa agttagaaat gtataaaaca 120  
 ccatcagaca ggttttttaa aaacaacata ttacaaaatt agacaatcat ccttaaaaaa 180  
 aaaacttctt gtatcaattt cttttgttca aaatgactga ctttaantatt tttaaatatt 240  
 tcanaaacac ttcctcaaaa attttcaana tggtagcttt canatgtgcc ctcagtccca 300  
 atgttgctca gataaataaa tctcgtgaga acttaccacc caccacaagc tttctggggc 360  
 atgcaacagt gtcttttctt tnttttttct tttttttttt ttacaggcac agaaactcat 420  
 caattttatt tggataacaa aggggtctcca aattatattg aaaaataaat ccaagttaat 480  
 atcactcttg t 491

<210> 53  
 <211> 484  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(484)  
 <223> n = A,T,C or G

<400> 53  
 acataattta gcagggctaa ttaccataag atgctatttta ttaanaggtn tatgatctga 60  
 gtattaacag ttgctgaagt ttggtatttt tatgcagcat tttctttttg ctttgataac 120  
 actacagaac ccttaaggac actgaaaatt agtaagtaaa gttcagaaac attagctgct 180  
 caatcaaate tctacataac actatagtaa ttaaaacgtt aaaaaaaagt gttgaaatct 240  
 gcactagtat anaccgctcc tgtcaggata anactgcttt ggaacagaaa gggaaaaanc 300  
 agctttgant ttctttgtgc tgatangagg aaaggctgaa ttacctgtt gcctctccct 360  
 aatgattggc aggtcnggta aatnccaaaa catattccaa ctcaacactt cttttccncg 420  
 tancttgant ctgtgtattc caggancagg cggatggaat gggccagccc ncggatgttc 480  
 cant 484

<210> 54  
 <211> 151  
 <212> DNA  
 <213> Homo sapien

<400> 54  
 actaaacctc gtgcttgtga actccataca gaaaacgggtg ccatccctga acacggctgg 60  
 ccactgggta tactgctgac aaccgcaaca acaaaaacac aaatccttgg cactggctag 120  
 tctatgtcct ctcaagtgcc tttttgtttg t 151

<210> 55  
 <211> 91  
 <212> DNA  
 <213> Homo sapien

<400> 55  
 acctggcttg tctccgggtg gttcccggcg cccccacgg tccccagaac ggacactttc 60  
 gccctccagt ggatactga gccaaagtgg t 91

<210> 56  
 <211> 133  
 <212> DNA  
 <213> Homo sapien

<400> 56  
 ggcggatgtg cgttggttat atacaaatat gtcattttat gtaagggact tgagtatact 60  
 tggatttttg gtatctgtgg gttgggggga cggtcagga accaatatcc catggatacc 120  
 aagggacaac tgt 133

<210> 57  
 <211> 147  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(147)  
 <223> n = A,T,C or G

<400> 57  
 actctggaga acctgagccg ctgctccgcc tctgggatga ggtgatgcan gcngtggcgc 60  
 gactgggagc tgagcccttc cctttgcgcc tgccctcagag gattgttgcc gacntgcana 120  
 tctcantggg ctggatncat gcagggt 147

<210> 58

<211> 198  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(198)  
 <223> n = A,T,C or G

<400> 58  
 acagggatat aggtttnaag ttattgtnat tgtaaaatac attgaatttt ctgtatactc 60  
 tgattacata cttttatcct ttaaaaaaga tgtaaatcct aatttttatg ccactctatta 120  
 atttaccat gagttacctt gtaaatgaga agtcatgata gcactgaatt ttaactagtt 180  
 ttgacttcta agtttggt 198

<210> 59  
 <211> 330  
 <212> DNA  
 <213> Homo sapien

<400> 59  
 acaacaaatg ggttgtagg aagtcttatac agcaaaaactg gtgatggcta ctgaaaagat 60  
 ccattgaaaa ttatcattaa tgatttttaa tgacaagtta tcaaaaactc actcaatttt 120  
 cacctgtgct agcttgctaa aatgggagtt aactctagag caaatatagt atcttctgaa 180  
 tacagtcaat aaatgacaaa gccagggcct acaggtgggt tccagacttt ccagaccag 240  
 cagaaggaat ctattttatc acatggatct ccgtctgtgc tcaaaatacc taatgatatt 300  
 tttcgtcttt attggacttc tttgaagagt 330

<210> 60  
 <211> 175  
 <212> DNA  
 <213> Homo sapien

<400> 60  
 accgtgggtg ctttctacat tcctgacggc tcttccacca acatctgggt ctacttcggc 60  
 gtctgtgggt ctttctctt catcctcatc cagctgggtg tgctcatcga ctttgccgac 120  
 tcttggaacc agcgggtggc gggcaaggcc gaggagtgcg attcccgtgc ctggt 175

<210> 61  
 <211> 154  
 <212> DNA  
 <213> Homo sapien

<400> 61  
 accccacttt tcttctgtg agcagtctgg acttctcact gctacatgat gaggggtgagt 60  
 ggttggtgct cttcaacagt atcctcccct ttccggatct gctgagccgg acagcagtgc 120  
 tggactgcac agccccggg ctccacattg ctgt 154

<210> 62  
 <211> 30  
 <212> DNA  
 <213> Homo sapien

<400> 62  
 cgctcgagcc ctatagtgag tcgtattaga 30

<210> 63  
 <211> 89  
 <212> DNA  
 <213> Homo sapien

<400> 63



acaagtcatt tcagcaccct ttgctcttca aaactgacca tcttttatat ttaatgcttc 60  
ctgtatgaat aaaaatggtt atgtcaagt 89

<210> 64  
<211> 97  
<212> DNA  
<213> Homo sapien

<400> 64  
accggagtaa ctgagtcggg acgctgaatc tgaatccacc aataaataaa ggttctgcag 60  
aatcagtga tccaggattg gtccttggat ctggggg 97

<210> 65  
<211> 377  
<212> DNA  
<213> Homo sapien

<220>  
<221> misc\_feature  
<222> (1)...(377)  
<223> n = A,T,C or G

<400> 65  
acaacaanaa ntcccttctt taggccactg atggaaacct ggaacccctt tttgatggca 60  
gcatggcgtc ctaggccttg acacagcggc tggggtttgg gctntccaa accgcacacc 120  
ccaaccctgg tctaccaca nttctggcta tgggctgtct ctgccactga acatcagggt 180  
tcggtcataa natgaaatcc caanggggac agaggtcagt agaggaagct caatgagaaa 240  
ggtgctgttt gtcagccag aaaacagctg cctggcattc gccgctgaac tatgaacccg 300  
tgggggtgaa ctaccccccag gaggaatcat gcctgggcca tgcaanggtg ccaacaggag 360  
gggcgggagg agcatgt 377

<210> 66  
<211> 305  
<212> DNA  
<213> Homo sapien

<400> 66  
acgcctttcc ctcagaattc agggaagaga ctgtcgcttg ccttctctccg ttgttgcggtg 60  
agaacccgtg tgccccttcc caccatatcc accctcgctc catctttgaa ctcaaacacg 120  
aggaactaac tgcaccctgg tctctctccc agtccccagt tcaccctcca tccctcacct 180  
tcttccactc taagggatat caacactgcc cagcacaggg gccctgaatt tatgtgggtt 240  
ttatatattt titaataaga tgcactttat gtcatttttt aataaagtct gaagaattac 300  
tggtt 305

<210> 67  
<211> 385  
<212> DNA  
<213> Homo sapien

<400> 67  
actacacaca ctccacttgc ccttgtgaga cactttgtcc cagcacttta ggaatgctga 60  
ggtcggacca gccacatctc atgtgcaaga ttgccagca gacatcagggt ctgagagttc 120  
cccttttaa aaaggggact tgcttaaaaa agaagtctag ccacgattgt gtagagcagc 180  
tgtgctgtgc tggagattca cttttgagag agttctctc tgagacctga tctttagagg 240  
ctgggcagtc ttgcacatga gatggggctg gtctgatctc agcactcctt agtctgcttg 300  
cctctcccag ggccccagcc tggccacacc tgcttacagg gcactctcag atgccatac 360  
catagtttct gtgctagtgg accgt 385

<210> 68  
<211> 73  
<212> DNA  
<213> Homo sapien

<400> 68  
 acttaaccag atatattttt accccagatg gggatattct ttgtaaaaaa tgaaaataaa 60  
 gtttttttaa tgg 73

<210> 69  
 <211> 536  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(536)  
 <223> n = A,T,C or G

<400> 69  
 actagtccag tgtggtggaa ttccattgtg ttgggggctc tcaccctcct ctccctgcagc 60  
 tccagctttg tgctctgcct ctgaggagac catggcccag catctgagta ccctgctgct 120  
 cctgctggcc accctagctg tggccctggc ctggagcccc aaggaggagg ataggataat 180  
 cccgggtggc atctataacg cagacctcaa tgatgagtgg gtacagcgtg cccttcactt 240  
 cgccatcagc gagtataaca aggccaccaa agatgactac tacagacgtc cgctgcgggt 300  
 actaagagcc aggcaacaga ccgttggggg ggtgaattac ttcttcgacg tagagggtgg 360  
 ccgaaccata tgtaccaagt cccagcccaa cttggacacc tgtgccttcc atgaacagcc 420  
 agaactgcag aagaaacagt tgtgctcttt cgagatctac gaagttccct ggggagaaca 480  
 gaangtcctt gggtgaaatc caggtgtcaa gaaatcctan ggatctgttg ccaggc 536

<210> 70  
 <211> 477  
 <212> DNA  
 <213> Homo sapien

<400> 70  
 atgacccta acagggggccc tctcagccct cctaattgacc tccggcctag ccatgtgatt 60  
 tcacttccac tccataacgc toctcatact aggccacta accaaccacac taaccatata 120  
 ccaatgatgg cgcgatgtaa cacgagaaaag cacataccaa ggccaccaca caccacctgt 180  
 ccaaaaaggc cttcgatacg ggataatcct atttattacc tcagaagttt ttttcttcgc 240  
 agggattttt ctgagccttt taccactcca gcctagcccc taccocccaa ctaggagggc 300  
 actggccccc aacaggcatc accccgctaa atcccctaga agtcccactc ctaaacacat 360  
 ccgtattact cgcacagga gtatcaatca cctgagctca ccatagtcta atagaaaaca 420  
 accgaaacca aattattcaa agcactgctt attacaattt tactgggtct ctatttt 477

<210> 71  
 <211> 533  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(533)  
 <223> n = A,T,C or G

<400> 71  
 agagctatag gtacagtgtg atctcagctt tgcaaacaca ttttctacat agatagtact 60  
 aggtattaat agatatgtaa agaaagaaat cacaccatta ataatggtaa gattggttta 120  
 tgtgatttta gtggtatttt tggcaccctt atatattgtt tccaaacttt cagcagtgat 180  
 attatttcca taacttaaaa agtgagtttg aaaaagaaaa tctccagcaa gcatctcatt 240  
 taaataaagg tttgtcatct ttaaaaatac agcaatatgt gactttttta aaaagctgtc 300  
 aaataggtgt gaccctacta ataattatta gaaatacatt taaaaacatc gagtacctca 360  
 agtcagtttg cttcgaaaaa tatcaaatat aactccttag gaaatgtaca taaaagaatg 420  
 cttcgtaatt ttggagtang aggttccttc ctcaattttg tattttttaa aagtacatgg 480  
 taaaaaaaaa aattcacaac agtatataag gctgtaaaat gaagaattct gcc 533

<210> 72

<211> 511  
 <212> DNA  
 <213> Homo sapien  
  
 <220>  
 <221> misc\_feature  
 <222> (1)...(511)  
 <223> n = A,T,C or G

<400> 72  
 tattacggaa aaacacacca cataattcaa ctancaaaga anactgcttc agggcggtgta 60  
 aaatgaaagg cttccaggca gttatctgat taaagaacac taaaagaggg acaaggctaa 120  
 aagccgcagg atgtctacac tatancaggc gctatttggg ttggctggag gagctgtgga 180  
 aaacatggan agattgggtgc tgganacgc cgtggctatt cctcattgtt attacanagt 240  
 gaggttctct gtgtgcccac tggtttgaaa accgttctnc aataatgata gaatagtaca 300  
 cacatgagaa ctgaaatggc ccaaaccag aaagaaagcc caactagatc ctcagaanac 360  
 gcttctaggg acaataaccg atgaagaaaa gatggcctcc ttgtgcccc gtctgttatg 420  
 atttctctcc attgcagcna naaaccggtt cttctaagca aacncagggt atgatggcna 480  
 aaatacacc cctcttgaag naccnggag a 511

<210> 73  
 <211> 499  
 <212> DNA  
 <213> Homo sapien  
  
 <220>  
 <221> misc\_feature  
 <222> (1)...(499)  
 <223> n = A,T,C or G

<400> 73  
 cagtgccagc actggtgccca gtaccagtag caataacagt gccagtgccca gtgccagcac 60  
 cagtgggtggc ttccagtgtg gtgccagcct gaccgccact ctcacatttg ggctcttcgc 120  
 tggccttggg ggagctgggt ccagcaccag tggcagctct ggtgcctgtg gtttctccta 180  
 caagttagat tttagatatt gttaatcctg ccagtctttc tcttcaagcc aggggtgcac 240  
 ctcagaaacc tactcaacac agcactctag gcagccacta tcaatcaatt gaagttgaca 300  
 ctctgcatla aatctatttg ccatttctga aaaaaaaaaa aaaaaaaggg cgcccgctcg 360  
 antctagagg gcccgtttaa acccgctgat cagcctcgac tgtgccttct anttgccagc 420  
 catctgttgt ttgccctcc cccgntgcct tcttgaccc tggaaagtgc cactccact 480  
 gtcctttcct aantaaat 499

<210> 74  
 <211> 537  
 <212> DNA  
 <213> Homo sapien  
  
 <220>  
 <221> misc\_feature  
 <222> (1)...(537)  
 <223> n = A,T,C or G

<400> 74  
 tttcatagga gaacacactg aggagatact tgaagaattt ggattcagcc gcgaagagat 60  
 ttatcagctt aactcagata aaatcattga aagtaataag gtaaaagcta gtctctaact 120  
 tccaggccca cggctcaagt gaatttgaat actgcattta cagtgtagag taacacataa 180  
 cattgtatgc atggaaacat ggaggaacag tattacagtg tcctaccact ctaatcaaga 240  
 aaagaattac agactctgat tctacagtga tgattgaatt ctaaaaatgg taatcattag 300  
 ggcttttgat ttataanact ttgggtactt atactaaatt atggtagtta tactgccttc 360  
 cagtttgctt gatattttg ttgatattaa gattcctgac ttatattttg aatgggttct 420  
 actgaaaaan gaatgatata ttcttgaaga catcgatata catttattta cactcttgat 480  
 tctacaatgt agaaaatgaa ggaaatgcc caaattgtat ggtgataaaa gtcccgt 537

<210> 75  
 <211> 467  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(467)  
 <223> n = A,T,C or G

<400> 75  
 caaanacaat tgttcaaaag atgcaaatag tacactactg ctgcagctca caaacacctc 60  
 tgcattattac acgtacctcc tctgtctcct caagtagtgt ggtctatttt gccatcatca 120  
 cctgtctgtct gcttagaaga acggctttct gctgcaangg agagaaatca taacagacgg 180  
 tggcacaagg aggccatctt ttccctcatcg gttattgtcc ctagaagcgt cttctgagga 240  
 tctagttggg ctttctttct gggtttgggc catttcantt ctcatgtgtg tactattcta 300  
 tcattattgt ataacgggtt tcaaaccngt gggcacncag agaacctcac tctgtaataa 360  
 caatgaggaa tagccacggt gatctccagc accaaatctc tccatgttnt tccagagctc 420  
 ctccagccaa cccaaatagc cgctgctatn gtgtagaaca tccctgn 467

<210> 76  
 <211> 400  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(400)  
 <223> n = A,T,C or G

<400> 76  
 aagctgacag cattcggggc gagatgtctc gctccgtggc cttagctgtg ctgcgctac 60  
 tctctctttc tggcctggag gctatccagc gtactccaaa gattcagggt tactcacgtc 120  
 atccagcaga gaatggaaa tcaaatttcc tgaattgcta tgtgtctggg tttcatccat 180  
 ccgacattga agttgactta ctgaagaatg gagagagaat tgaaaaagtg gagcattcag 240  
 acttgtcttt cagcaaggac tgggtctttct atctcttgta ctacactgaa ttcaccccca 300  
 ctgaaaaaga tgagtatgcc tgccgtgtga accatgtgac tttgtcacag cccaagatng 360  
 ttnagtggga tcganacatg taagcagcan catgggaggt 400

<210> 77  
 <211> 248  
 <212> DNA  
 <213> Homo sapien

<400> 77  
 ctggagtgcc ttggtgtttc aagcccctgc aggaagcaga atgcaccttc tgaggcacct 60  
 ccagctgccc cggcggggga tgcgaggctc ggagcaccct tgcccggctg tgattgtctg 120  
 caggcactgt tcatctcagc tttctgtgac ctttgctccc ggcaagcgt tctgtgaaa 180  
 gttcatatct ggagcctgat gtcttaacga ataaaggtcc catgctccac ccgaaaaaaa 240  
 aaaaaaaa 248

<210> 78  
 <211> 201  
 <212> DNA  
 <213> Homo sapien

<400> 78  
 actagtccag tgtggtggaa ttccattgtg ttgggcccac cacaatggct acctttaaca 60  
 tcacccagac cccgccctgc ccgtgccca cgctgctgct aacgacagta tgatgcttac 120  
 tctgtactc ggaaactatt tttatgtaat taatgtatgc tttcttggtt ataatgcct 180  
 gatttaaaaa aaaaaaaaaa a 201

<210> 79  
 <211> 552  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(552)  
 <223> n = A,T,C or G

<400> 79  
 tccttttgtt aggtttttga gacaacccta gacctaaact gtgtcacaga cttctgaatg 60  
 tttaggcagt gctagtaatt tcctcgtaat gattctgtta ttactttcct attctttatt 120  
 cctctttcct ctgaagatta atgaagttga aaattgaggt ggataaatat aaaaaggtag 180  
 tgtgatagta taagtatcta agtgcagatg aaagtgtgtt atatatatcc attcaaaatt 240  
 atgcaagtta gtaattactc agggttaact aaattacttt aatatgctgt tgaacctact 300  
 ctgttccttg gctagaaaaa attataaaca ggactttgtt agtttgggaa gccaaattga 360  
 taatattcta tgtttctaaaa gttgggctat acataaanta tnaagaaata tggaatttta 420  
 ttcccaggaa tatgggggttc atttatgaat antaccggg anagaagttt tgantnaaac 480  
 cngttttggt taatacgta atatgtcctn aatnaacaag gcntgactta ttccaaaaa 540  
 aaaaaaaaa aa 552

<210> 80  
 <211> 476  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(476)  
 <223> n = A,T,C or G

<400> 80  
 acagggattt gagatgctaa ggccccagag atcgtttgat ccaaccctct tattttcaga 60  
 ggggaaaatg gggcctagaa gttacagagc atctagctgg tgcgctggca cccctggcct 120  
 cacacagact cccgagtagc tgggactaca ggcacacagt cactgaagca ggccctgttt 180  
 gcaattcacg ttgccacctc caacttaaac attcttcata tgtgatgtcc ttagtcacta 240  
 aggttaaact ttcccaccca gaaaaggcaa cttagataaa atcttagagt actttcatac 300  
 tcttctaagt cctcttcag cctcactttg agtcctcctt gggggttgat aggaantntc 360  
 tcttggttt ctcaataaaa tctctatcca tctcatgttt aatttggtac gcntaaaaat 420  
 gctgaaaaaa ttaaaatgtt ctggtttcnc tttaaaaaaa aaaaaaaaaa aaaaaa 476

<210> 81  
 <211> 232  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(232)  
 <223> n = A,T,C or G

<400> 81  
 ttttttttg tatgcntcn ctgtgngtt attgttgctg ccaccctgga ggagcccagt 60  
 ttcttctgta tctttctttt ctgggggata ttcttggtc tgccctcca ttcccagcct 120  
 ctcatcccca tcttgcaatt ttgctagggt tggaggcgct ttctggttag cccctcagag 180  
 actcagtcag cgggaataag tctagggggt ggggggtgtg gcaagccggc ct 232

<210> 82  
 <211> 383  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(383)  
 <223> n = A,T,C or G

<400> 82  
 aggcggggagc agaagctaaa gccaaagccc aagaagagtg gcagtgccag cactgggtgcc 60  
 agtaccagta ccaataacat gccagtgccca gtgccagcac cagtgggtggc ttcagtgctg 120  
 gtgccagcct gaccgccact ctcacatttg ggctcttcgc tggccttggg ggagctgggt 180  
 ccagcaccag tggcagctct ggtgcctgtg gttctccta caagtgagat tttagatatt 240  
 gttaatcctg ccagtctttc tcttcaagcc aggggtgcatc ctcagaaacc tactcaacac 300  
 agcactctng gcagccacta tcaatcaatt gaagttgaca ctctgcatta aatctatttg 360  
 ccatttcaaa aaaaaaaaaa aaa 383

<210> 83  
 <211> 494  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(494)  
 <223> n = A,T,C or G

<400> 83  
 accgaattgg gaccgctggc ttataagcga tcatgtcctc cagtattacc tcaacgagca 60  
 gggagatcga gtctatacgc tgaagaaatt tgacccgatg ggacaacaga cctgctcagc 120  
 ccatcctgct cgtttctccc cagatgacaa atactctcga caccgaatca ccatcaagaa 180  
 acgcttcaag gtgctcatga cccagcaacc gcgccctgtc ctctgagggg ccttaaactg 240  
 atgtcttttc tgccacctgt taccctcctg agactccgta accaaactct tcggactgtg 300  
 agccctgatg cctttttgcc agccatactc tttggcntcc agtctctcgt ggcgattgat 360  
 tatgcttggtg tgaggcaatc atggtggcat caccatnaa gggaacacat ttganttttt 420  
 tttncatat tttaaattac naccagaata nttcagaata aatgaattga aaaactctta 480  
 aaaaaaaaaa aaaa 494

<210> 84  
 <211> 380  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(380)  
 <223> n = A,T,C or G

<400> 84  
 gctggtagcc tatggcgtgg ccacgggang gctcctgagg cacgggacag tgacttccca 60  
 agtatcctgc gccgcgtctt ctaccgtccc tacctgcaga tcttcgggca gattccccag 120  
 gaggacatgg acgtggccct catggagcac agcaactgct cgctggagcc cggtctctgg 180  
 gcacaccctc ctggggccca ggcgggcacc tgcgtctccc agtatgcaa ctggctgggtg 240  
 gtgctgctcc tcgtcatctt cctgctcgtg gccaacatcc tgctgggtcac ttgctcattg 300  
 ccatgttcag ttacacattc ggcaaagtag agggcaacag cnatctctac tgggaaggcc 360  
 agcggttnccg cctcatccgg 380

<210> 85  
 <211> 481  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature

&lt;222&gt; (1)...(481)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 85

gagtttagctc	ctccacaacc	ttgatgaggt	cgtctgcagt	ggcctctcgc	ttcataccgc	60
tnccatcgtc	atactgtagg	tttgccacca	cctcctgcat	cttggggcgg	ctaatatcca	120
ggaaactctc	aatcaagtca	ccgtcnatna	aacctgtggc	tggttctgtc	ttccgctcgg	180
tgtgaaagga	tctccagaag	gagtgtctga	tcttccccac	acttttgatg	actttattga	240
gtcgattctg	catgtccagc	aggaggttgt	accagctctc	tgacagtgag	gtcaccagcc	300
ctatcatgcc	nttgaacgtg	ccgaagaaca	ccgagccttg	tgtggggggg	gnagtctcac	360
ccagattctg	cattaccaga	nagccgtggc	aaaaganatt	gacaactcgc	ccaggngaa	420
aaagaacacc	tcttggaagt	gctngccgct	cctcgctcnt	tggtggnggc	gcntnccttt	480
t						481

&lt;210&gt; 86

&lt;211&gt; 472

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(472)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 86

aacatcttcc	tgtataatgc	tgtgtaatat	cgatccgatn	ttgtctgctg	agaattcatt	60
acttgaaaaa	gcaacttnaa	gcctggacac	tggtattaaa	attcacaata	tgcaaacatt	120
taaacagtgt	gtcaatctgc	tcccttactt	tgtcatcacc	agtctgggaa	taagggtatg	180
ccctattcac	acctgttaaa	agggcgctaa	gcatttttga	ttcaacatct	ttttttttga	240
cacaagtccg	aaaaaaagca	aagtaaacag	ttnttaattt	gttagccaat	tcactttctt	300
catgggacag	agccatttga	tttaaaaagc	aaattgcata	atattgagct	ttgggagctg	360
atatntgagc	ggaagantag	cctttctact	tcaccagaca	caactccttt	catattggga	420
tgttnacnaa	agttatgtct	cttacagatg	ggatgctttt	gtggcaattc	tg	472

&lt;210&gt; 87

&lt;211&gt; 413

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(413)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 87

agaaaccagt	atctctnaaa	acaacctctc	ataccttggtg	gacctaat	ttgtgtgcgtg	60
tgtgtgtgcg	cgcatattat	atagacaggc	acatcttttt	tacttttgta	aaagcttatg	120
cctcttttgt	atctatatct	gtgaaagttt	taatgatctg	ccataatgct	ttggggacct	180
ttgtcttctg	tgtaaatggg	actagagaaa	acacctatnt	tatgagtcaa	tctagttngt	240
tttattcgac	atgaaggaaa	tttccagatn	acaacactna	caaactctcc	cttgactagg	300
ggggacaaag	aaaagcnaaa	ctgaacatna	gaaacaattn	cctggtgaga	aattncataa	360
acagaaattg	ggtngtatat	tgaaanang	catcattnaa	acgttttttt	ttt	413

&lt;210&gt; 88

&lt;211&gt; 448

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(448)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 88

cgcagcgggt	cctctctatc	tagctccage	ctctcgctg	ccccactccc	cgcgtcccgc	60
gtcctagccn	accatggccg	ggccccctgcg	cgccccgctg	ctcctgctgg	ccatcctggc	120
cgtggccctg	gccgtgagcc	ccgcggcccg	ctccagtcctc	ggcaagccgc	cgcgcctggt	180
gggaggccca	tggacccccg	gtggaagaag	aagggtgtgcg	gcgtgcactg	gactttgccg	240
tcggcnanta	caacaaaccc	gcaacnactt	ttaccnagcn	cgcgtgcag	gttgtgccgc	300
cccaancaaa	ttgttactng	gggtaantaa	ttcttggaag	ttgaacctgg	gccaaaacnn	360
tttaccagaa	ccnagccaat	tngaacaatt	nccccctcat	aacagcccct	tttaaaaagg	420
gaancantcc	tgntcttttc	caaatattt				448

&lt;210&gt; 89

&lt;211&gt; 463

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(463)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 89

gaattttgtg	cactggccac	tgtgatggaa	ccattgggcc	aggatgcttt	gagtttatca	60
gtagtgattc	tgccaaagtt	ggtgttgtaa	catgagtatg	taaaatgtca	aaaaattagc	120
agaggtctag	gtctgcatat	cagcagacag	tttgtccgtg	tattttgtag	ccttgaagtt	180
ctcagtgaca	agttntttct	gatgcgaagt	tctnattcca	gtgttttagt	cctttgcac	240
tttnatgtn	agacttgcc	ctntnaaatt	gcttttgtnt	tctgcaggta	ctatctgtgg	300
tttaacaaaa	tagaannact	tctctgcttn	gaanatttga	atatcttaca	tctnaaaatn	360
aattctctcc	ccatannaana	acccangccc	ttggganaat	ttgaaaaang	gntccttcnn	420
aattcnnana	anttcagtn	tcatacaaca	naacngganc	ccc		463

&lt;210&gt; 90

&lt;211&gt; 400

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(400)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 90

agggattgaa	ggtctntnt	actgtcggac	tgttcancca	ccaactctac	aagttgctgt	60
cttccactca	ctgtctgtaa	gcntnttaac	ccagactgta	tcttcataaa	tagaacaat	120
tcttcaccag	tcacatcttc	taggaccttt	ttggattcag	ttagtataag	ctcttccact	180
tcctttgtta	agacttcac	tggtaaaagtc	tttaagttttg	tagaaaggaa	tttaattgct	240
cgttctctaa	caatgtcctc	tccttgaagt	atttggctga	acaacccacc	tnaagtcct	300
ttgtgcatcc	attttaaata	tacttaatag	ggcattggtn	cactagggtta	aattctgcaa	360
gagtcactctg	tctgcaaaaag	ttgcgttagt	atatctgcca			400

&lt;210&gt; 91

&lt;211&gt; 480

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(480)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 91

gagctcggat	ccaataatct	ttgtctgagg	gcagcacaca	tatncagtgc	catggnaact	60
------------	------------	------------	------------	------------	------------	----



ggtctacccc	acatgggagc	agcatgccgt	agntatataa	ggtcattccc	tgagtcagac	120
atgcctcttt	gactaccgtg	tgccagtget	ggtgattctc	acacacctcc	nncgcgtctt	180
tgtggaaaaa	ctggcacttg	nctggaaacta	gcaagacatc	acttaciaat	tcacccacga	240
gacacttgaa	aggtgtaaca	aagcgactct	tgcatgtgtt	tttgtccctc	cggcaccagt	300
tgtcaatact	aacccgctgg	tttgccctcca	tcacatttgt	gatctgtagc	tctggataca	360
tctcctgaca	gtactgaaga	acttcttctt	ttgtttcaaa	agcaactctt	ggtgcctgtt	420
ngatcaggtt	cccatttccc	agtccgaatg	ttcacatggc	atatnttact	tcccacaaaa	480

<210> 92  
 <211> 477  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(477)  
 <223> n = A,T,C or G

<400> 92						
atacagccca	natcccacca	cgaagatgcg	cttgttgact	gagaacctga	tgccggtcact	60
ggtcccgtg	tagccccagc	gactctccac	ctgctggaag	cgggtgatgc	tgcaactcctt	120
cccacgcagg	cagcagcggg	gccggtcaat	gaactccact	cgtggcttgg	gggtgacggg	180
taantgcagg	aagaggctga	ccacctcgcg	gtccaccagg	atgcccgact	gtgcggggacc	240
tgacgcgaaa	ctcctcgatg	gtcatgagcg	ggaagcgaat	gangcccagg	gccttgccca	300
gaaccttccg	cctgtttctt	ggcgtcacct	gcagctgctg	ccgctnacac	tccgctcgg	360
accagcggac	aaacggcggt	gaacagccgc	acctcacgga	tgcccantgt	gtcgcgctcc	420
aggaacggcn	ccagcgtgtc	caggtcaatg	tcggtgaanc	ctccgcgggt	aatggcg	477

<210> 93  
 <211> 377  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(377)  
 <223> n = A,T,C or G

<400> 93						
gaacggctgg	accttgccctc	gcattgtgct	gctggcagga	ataccttggc	aagcagctcc	60
agtccgagca	gccccagacc	gctgccgccc	gaagctaagc	ctgcctctgg	ccttcccctc	120
cgcctcaatg	cagaaccant	agtgggagca	ctgtgtttag	agttaagagt	gaacactgtg	180
tgattttact	tggaatttc	ctctgttata	tagcttttcc	caatgcta	ttccaaacaa	240
caacaacaaa	ataacatgtt	tgccgtttna	gttggtataaa	agtangtgat	tctgtatnta	300
aagaaaatat	tactgtttaca	tatactgctt	gcaantttctg	tattttattgg	tnctctggaa	360
ataaatatat	tattaaa					377

<210> 94  
 <211> 495  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(495)  
 <223> n = A,T,C or G

<400> 94						
ccctttgagg	ggttagggtc	cagttcccag	tggaagaaac	aggccaggag	aantgcgtgc	60
cgagctgang	cagatttccc	acagtgacct	cagagccctg	ggctatagtc	tctgacctct	120
ccaaggaaaag	accaccttct	ggggacatgg	gctggagggc	aggacctaga	ggcaccaagg	180
gaaggcccca	ttccggggct	gttccccgag	gaggaagggg	aggggctctg	tgtgcccccc	240

acgaggaana	ggccctgant	cctgggatca	nacacccctt	cacgtgtatc	cccacacaaa	300
tgcaagctca	ccaagggtccc	ctctcagtc	cttccctaca	ccctgaacgg	ncaactggccc	360
acacccaccc	agancancca	cccgccatgg	ggaatgtnc	caaggaatcg	cngggcaacg	420
tggaactctng	tcccnnaagg	gggcagaatc	tccaatagan	gganngaacc	cttgctnana	480
aaaaaaaaana	aaaaa					495

<210> 95  
 <211> 472  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(472)  
 <223> n = A,T,C or G

<400> 95						
ggttacttgg	tttcattgcc	accacttagt	ggatgtcatt	tagaaccatt	ttgtctgctc	60
cctctggaag	ccttgccgag	agcggacttt	gtaattgttg	gagaataact	gctgaatttt	120
tagctgtttt	gagttgattc	gcaccactgc	accacaactc	aatatgaaaa	ctatttnact	180
tatttattat	cttgtgaaaa	gtatacaatg	aaaattttgt	tcatactgta	tttatcaagt	240
atgatgaaaa	gcaatagata	tatattcttt	tattatgttn	aattatgatt	gccattatta	300
atcggaacaaa	tgtggagtgt	atgttctttt	cacagtaata	tatgcctttt	gtaacttcac	360
ttggttattt	tattgtaaat	gaattacaaa	attcttaatt	taagaaaatg	gtangttata	420
tttanttcan	taatttcttt	ccttgtttac	gttaattttg	aaaagaatgc	at	472

<210> 96  
 <211> 476  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(476)  
 <223> n = A,T,C or G

<400> 96						
ctgaagcatt	tcttcaaact	tntctacttt	tgtcattgat	acctgtagta	agttgacaat	60
gtgggtgaaat	ttcaaaaatta	tatgtaactt	ctactagttt	tactttctcc	cccaagtctt	120
ttttaactca	tgattttttac	acacacaatc	cagaacttat	tatatagcct	ctaagtcttt	180
attcttcaca	gtagatgatg	aaagagtcct	ccagtgtcct	gngcanaatg	ttctagntat	240
agctggatac	atacngtggg	agttctataa	actcatacct	cagtgggact	naacccaaat	300
tgtgttagtc	tcaattccta	ccacactgag	ggagcctccc	aaatcactat	attcttatct	360
gcagggtactc	ctccagaaaa	acngacaggg	caggcttgca	tgaaaaagtn	acatctgcgt	420
tacaaagtct	atcttcctca	nangtctgt	aaggaacaat	ttaatcttct	agcttt	476

<210> 97  
 <211> 479  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(479)  
 <223> n = A,T,C or G

<400> 97						
actctttcta	atgtcgatat	gatcttgagt	ataagaatgc	atatgtcact	agaatggata	60
aaataatgct	gcaaaacttaa	tgttcttatg	caaaatggaa	cgctaatagaa	acacagctta	120
caatcgcaaa	tcaaaactca	caagtgtctca	tctgtttgtag	athtagtgta	ataagactta	180
gattgtgctc	cttcggatat	gattgtttct	canatcttgg	gcaatnttcc	ttagtcaaat	240
caggctacta	gaattctgtt	attggatatn	tgagagcatg	aaattttttaa	naatacactt	300

gtgattatna	aattaatcac	aaatttcact	tatacctgct	atcagcagct	agaaaaacat	360
ntnnttttta	natcaaagta	ttttgtgttt	ggaantgttn	aatgaaatc	tgaatgtggg	420
ttcnatctta	ttttttcccn	gacnactant	tnctttttta	gggnctattc	tganccatc	479

<210> 98  
 <211> 461  
 <212> DNA  
 <213> Homo sapien

<400> 98						
agtgacttgt	cctccaacaa	aacccttga	tcaagtttgt	ggcactgaca	atcagaccta	60
tgctagttcc	tgtcatctat	tcgctactaa	atgcagactg	gaggggacca	aaaaggggca	120
tcaactccag	ctggattatt	ttggagcctg	caaactctatt	cctacttgta	cggactttga	180
agtgattcag	tttcctctac	ggatgagaga	ctggctcaag	aatatcctca	tgcagcttta	240
tgaagccact	ctgaacacgc	tggttatcta	gatgagaaca	gagaaataaa	gtcagaaaaat	300
ttacctggag	aaaagaggct	ttggctgggg	accatcccat	tgaaccttct	cttaaggact	360
ttaagaaaaa	ctaccacatg	ttgtgtatcc	tggtgccggc	cgtttatgaa	ctgaccaccc	420
tttggataaa	tcttgacgct	cctgaacttg	ctcctctgcy	a		461

<210> 99  
 <211> 171  
 <212> DNA  
 <213> Homo sapien

<400> 99						
gtggcgcgcg	gcaggtgttt	cctcgtagcg	cagggccccc	tcccttcccc	aggcgctccct	60
cggcgccctct	gcggggcccg	ggaggagcgg	ctggcggttg	gggggagtgt	gaccacacct	120
cggtagaaaa	agccttctct	agcgatctga	gaggcgtgcc	ttgggggtac	c	171

<210> 100  
 <211> 269  
 <212> DNA  
 <213> Homo sapien

<400> 100						
cggccgcaag	tgcaactcca	gctggggccg	tgcgagcaga	gattctgcca	gcagttggtc	60
cgactgcgac	gacggcgggc	gcgacagtcg	caggtgcagc	gcgggcgcct	ggggtcttgc	120
aaggctgagc	tgacgccgca	gaggtcgtgt	cacgtcccac	gaccttgacg	cgcgcgggga	180
cagccggaac	agagcccggg	gaagcgggag	gcctcgggga	gcccctcggg	aagggcggcc	240
cgagagatac	gcaggtgcag	gtggcccgcc				269

<210> 101  
 <211> 405  
 <212> DNA  
 <213> Homo sapien

<400> 101						
tttttttttt	ttttggaatc	tactgcgagc	acagcaggtc	agcaacaagt	ttattttgca	60
gctagcaagg	taacagggtg	gggcatgggt	acatgttcag	gtcaacttcc	tttgtcgtgg	120
ttgattgggt	tgtctttatg	ggggcggggt	ggggtagggg	aaacgaagca	aataacatgg	180
agtgggtgca	ccctccctgt	agaacctggg	tacaaagctt	ggggcagttc	acctgggtctg	240
tgaccgtcat	tttcttgaca	tcaatgttat	tagaagtcag	gatatctttt	agagagtcca	300
ctgttctgga	gggagattag	ggtttcttgc	caaatccaac	aaaatccact	gaaaaagttg	360
gatgatcagt	acgaataccg	aggcatattc	tcatatcggt	ggcca		405

<210> 102  
 <211> 470  
 <212> DNA  
 <213> Homo sapien

<400> 102						
tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	60

ggcacttaat	ccatttttat	ttcaaaatgt	ctacaaattt	aatcccatta	tacgggtattt	120
tcaaaatcta	aattattcaa	attagccaaa	tccttaccaa	ataataccca	aaaatcaaaa	180
atatacttct	ttcagcaaac	ttgttacata	aattaaaaaa	atatatacgg	ctgggtgtttt	240
caaagtacaa	ttatcttaac	actgcaaaaca	ttttaaggaa	ctaaaataaa	aaaaaacact	300
ccgcaaaagg	taaagggaac	aacaaattct	tttacaacac	cattataaaa	atcatatctc	360
aaatcttagg	ggaatatata	cttcacacgg	gatcttaact	tttactcact	ttgttttattt	420
ttttaaacca	ttgtttgggc	ccaacacaat	ggaatcccc	ctggactagt		470

&lt;210&gt; 103

&lt;211&gt; 581

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 103

tttttttttt	ttttttttga	ccccctctt	ataaaaaaca	agttaccatt	ttattttact	60
tacacatatt	tattttataa	ttggtattag	atattcaaaa	ggcagctttt	aaaatcaaac	120
taaattggaaa	ctgccttaga	tacataattc	ttaggaatta	gcttaaaatc	tgccataaagt	180
gaaaatcttc	tctagctctt	ttgactgtaa	atttttgact	cttgtaaaac	atccaaattc	240
atttttcttg	tctttaaaat	tatctaactc	ttccattttt	tccttattcc	aagtcaattt	300
gcttctctag	cctcattttc	tagctcttat	ctactattag	taagtggctt	ttttcctaaa	360
agggaaaaca	ggaagagaaa	tggcacacaa	aacaaacatt	ttatattcat	atttctacct	420
acgttaataa	aatagcattt	tgtgaagcca	gctcaaaaga	aggcttagat	ccttttatgt	480
ccattttagt	cactaaacga	tatcaaagt	ccagaatgca	aaaggtttgt	gaacattttat	540
tcaaaagcta	atataagata	tttcacatac	tcacttttct	g		581

&lt;210&gt; 104

&lt;211&gt; 578

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 104

tttttttttt	tttttttttt	tttttctctt	cttttttttt	gaaatgagga	tcgagttttt	60
cactctctag	atagggcatt	aagaaaactc	atctttccag	ctttaaaata	acaatcaaat	120
ctcttatgct	atatcatatt	ttaagttaaa	ctaattgagtc	actggcttat	cttctcctga	180
aggaaatctg	ttcattcttc	tcattcatat	agttatatca	agtactacct	tgcatattga	240
gagggtttttc	ttctctattt	acacatatat	ttccatgtga	atttgtatca	aacctttatt	300
ttcatgcaaa	ctagaaaata	atgtttcttt	tgcataagag	aagagaacaa	tatagcatta	360
caaaactgct	caaattgttt	gttaagttat	ccattataat	tagttggcag	gagctaatac	420
aaatcacatt	tacgacagca	ataataaaac	tgaagtacca	gttaaataac	caaaaataatt	480
aaaggaacat	tttttagcctg	ggtataatta	gctaattcac	tttacaagca	tttattagaa	540
tgaattcaca	tgttattatt	cctagcccaa	cacaatgg			578

&lt;210&gt; 105

&lt;211&gt; 538

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 105

tttttttttt	tttttcagta	ataatcagaa	caatatttat	tttttatattt	aaaattcata	60
gaaaagtgcc	ttacatttaa	taaaagtgtg	tttctcaaag	tgatcagagg	aattagatat	120
gtcttgaaca	ccaatattaa	tttgaggaaa	atacaccaaa	atacattaag	taaattattt	180
aagatcatag	agcttgtaag	tgaaaagata	aaatttgacc	tcagaaaactc	tgagcattaa	240
aatccacta	ttagcaaata	aattactatg	gacttcttgc	tttaattttg	tgatgaatat	300
ggggtgtcac	tggtaaacca	acacattctg	aaggatacat	tacttagtga	tagattctta	360
tgtactttgc	taatacgtgg	atatgagttg	acaagtttct	ctttcttcaa	tcttttaagg	420
ggcgagaaat	gaggaagaaa	agaaaaggat	tacgcatact	gttctttcta	tggaaggatt	480
agatatgttt	cctttgccaa	tattaaaaaa	ataataatgt	ttactactag	tgaaaccc	538

&lt;210&gt; 106

&lt;211&gt; 473

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

<400> 106  
 tttttttttt ttttttagtc aagtttctat ttttattata attaaagtct tgggtcatttc 60  
 atttatttagc tctgcaactt acatatttta attaaagaaa cgttttagac aactgtacaa 120  
 tttataaatg taagggtgcca ttattgagta atatattcct ccaagagtgg atgtgtccct 180  
 tctcccacca actaatgaac agcaacatta gttaattttt attagtagat atacactgct 240  
 gcaaacgcta attctcttct ccatcccat gtgatattgt gtatatgtgt gaggttggtag 300  
 aatgcatcac aatctacaat caacagcaag atgaagctag gctgggcttt cggtgaaaat 360  
 agactgtgtc tgtctgaatc aaatgatctg acctatcttc ggtggcaaga actcttcgaa 420  
 ccgcttcttc aaaggcgctg ccacatttgt ggctctttgc acttgtttca aaa 473

<210> 107  
 <211> 1621  
 <212> DNA  
 <213> Homo sapien

<400> 107  
 cgccatggca ctgcagggca tctcgggtcat ggagctgtcc ggectggccc cgggcccgtt 60  
 ctgtgctatg gtcctggctg acttcggggc gcgtgtggta cgcgtggacc ggcccggctc 120  
 ccgctacgac gtgagcggct tgggcccggg caagcgctcg ctagtgtctg acctgaagca 180  
 gccgccccga gccgcccgtg tgcggcgtct gtgcaagcgg tcggatgtgc tgctggagcc 240  
 cttccgcccgc ggtgtcatgg agaaactcca gctgggcca gagattctgc agcgggaaaa 300  
 tccaaggctt atttatgcca ggctgagtggt atttggccag tcaggaagct tctgccggtt 360  
 agctggccac gatatcaact atttggcttt gtcagggtgt ctctcaaaaa ttggcagaag 420  
 tggtgagaat ccgtatgccc cgctgaatct cctggctgac tttgctgggt gtggccttat 480  
 gtgtgcactg ggcattataa tggctctttt tgaccgcaca cgcactgaca agggtcaggt 540  
 cattgatgca aatatggtgg aaggaacagc atatttaagt tcttttctgt ggaaaaactca 600  
 gaaatcgagt ctgtgggaag cacctcgagg acagaacatg ttggatgggt gagcaccttt 660  
 ctatacgact taecaggacag cagatgggga attcatggct gttggagcaa tagaacccca 720  
 gttctacgag ctgctgatca aaggacttgg actaaagtct gatgaacttc ccaatcagat 780  
 gagcatggat gattggccag aaatgaagaa gaagtgttgc gatgtatttg caaagaagac 840  
 gaaggcagag tgggtgtcaaa tctttgacgg cacagatgcc tgtgtgactc cgggttctgac 900  
 ttttgaggag gttgttcatc atgatcacia caaggaacgg ggctcgttta tcaccagtga 960  
 ggagcaggac gtgagcccc gccctgcacc tctgctgtta aacaccccag ccattcccttc 1020  
 tttcaaaagg gatcctttca taggagaaca cactgaggag atacttgaag aatttggatt 1080  
 cagccgcgaa gagattttatc agcttaactc agataaaatc attgaaagta ataaggtaaa 1140  
 agctagtctc taacttccag gccacgggct caagtgaatt tgaatactgc atttacagt 1200  
 tagagtaaca cataacattg tatgcatgga aacatggagg aacagtatta cagtgtccta 1260  
 ccactctaata caagaaaaga attacagact ctgattctac agtgatgatt gaattctaaa 1320  
 aatggttatc attagggctt ttgatttata aaactttggg tacttatact aaattatggt 1380  
 agttattctg ctttccagtt tgcttgatat atttgttgat attaagattc ttgacttata 1440  
 ttttgaatgg gttctagtga aaaaggaatg atatatcttt gaagacatcg atatacattt 1500  
 atttacactc ttgattctac aatgtagaaa atgaggaaat gccacaaatt gtatggtgat 1560  
 aaaagtcacg tgaacaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1620  
 a 1621

<210> 108  
 <211> 382  
 <212> PRT  
 <213> Homo sapien

<400> 108  
 Met Ala Leu Gln Gly Ile Ser Val Met Glu Leu Ser Gly Leu Ala Pro  
 1 5 10 15  
 Gly Pro Phe Cys Ala Met Val Leu Ala Asp Phe Gly Ala Arg Val Val  
 20 25 30  
 Arg Val Asp Arg Pro Gly Ser Arg Tyr Asp Val Ser Arg Leu Gly Arg  
 35 40 45  
 Gly Lys Arg Ser Leu Val Leu Asp Leu Lys Gln Pro Arg Gly Ala Ala  
 50 55 60  
 Val Leu Arg Arg Leu Cys Lys Arg Ser Asp Val Leu Leu Glu Pro Phe  
 65 70 75 80

Arg Arg Gly Val Met Glu Lys Leu Gln Leu Gly Pro Glu Ile Leu Gln  
 85 90 95  
 Arg Glu Asn Pro Arg Leu Ile Tyr Ala Arg Leu Ser Gly Phe Gly Gln  
 100 105 110  
 Ser Gly Ser Phe Cys Arg Leu Ala Gly His Asp Ile Asn Tyr Leu Ala  
 115 120 125  
 Leu Ser Gly Val Leu Ser Lys Ile Gly Arg Ser Gly Glu Asn Pro Tyr  
 130 135 140  
 Ala Pro Leu Asn Leu Leu Ala Asp Phe Ala Gly Gly Gly Leu Met Cys  
 145 150 155 160  
 Ala Leu Gly Ile Ile Met Ala Leu Phe Asp Arg Thr Arg Thr Asp Lys  
 165 170 175  
 Gly Gln Val Ile Asp Ala Asn Met Val Glu Gly Thr Ala Tyr Leu Ser  
 180 185 190  
 Ser Phe Leu Trp Lys Thr Gln Lys Ser Ser Leu Trp Glu Ala Pro Arg  
 195 200 205  
 Gly Gln Asn Met Leu Asp Gly Gly Ala Pro Phe Tyr Thr Thr Tyr Arg  
 210 215 220  
 Thr Ala Asp Gly Glu Phe Met Ala Val Gly Ala Ile Glu Pro Gln Phe  
 225 230 235 240  
 Tyr Glu Leu Leu Ile Lys Gly Leu Gly Leu Lys Ser Asp Glu Leu Pro  
 245 250 255  
 Asn Gln Met Ser Met Asp Asp Trp Pro Glu Met Lys Lys Lys Phe Ala  
 260 265 270  
 Asp Val Phe Ala Lys Lys Thr Lys Ala Glu Trp Cys Gln Ile Phe Asp  
 275 280 285  
 Gly Thr Asp Ala Cys Val Thr Pro Val Leu Thr Phe Glu Glu Val Val  
 290 295 300  
 His His Asp His Asn Lys Glu Arg Gly Ser Phe Ile Thr Ser Glu Glu  
 305 310 315 320  
 Gln Asp Val Ser Pro Arg Pro Ala Pro Leu Leu Leu Asn Thr Pro Ala  
 325 330 335  
 Ile Pro Ser Phe Lys Arg Asp Pro Phe Ile Gly Glu His Thr Glu Glu  
 340 345 350  
 Ile Leu Glu Glu Phe Gly Phe Ser Arg Glu Glu Ile Tyr Gln Leu Asn  
 355 360 365  
 Ser Asp Lys Ile Ile Glu Ser Asn Lys Val Lys Ala Ser Leu  
 370 375 380

&lt;210&gt; 109

&lt;211&gt; 1524

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 109

ggcacgaggg	tgcgccaggg	cctgagcgga	ggcgggggca	gcctcgccag	cgggggcccc	60
gggcctggcc	atgcctcact	gagccagcgc	ctgcgcctct	acctcgccga	cagctggaac	120
cagtgcgacc	tagtggtct	cacctgtctc	ctcctgggcg	tgggctgccg	gctgaccccg	180
ggtttgtacc	acctgggccc	cactgtctct	tgcctcgact	tcattggttt	cacgggtgcg	240
ctgcttcaca	tcttcacggt	caacaaacag	ctggggccca	agatcgctcat	cgtgagcaag	300
atgatgaagg	acgtgttctt	cttctctctc	ttcctcggcg	tgtggctggt	agcctatggc	360
gtggccacgg	aggggtcct	gaggccacgg	gacagtgcct	tcccaagtat	cctgcgcgcg	420
gtcttctacc	gtccctacct	gcagatcttc	gggcagattc	cccaggagga	catggacgtg	480
gccctcatgg	agcacagcaa	ctgctcgctg	gagcccggtc	tctgggcaca	ccctcctggg	540
gcccaggcgg	gcacctgcgt	ctcccagtat	gccaaactgg	tggtggtgct	gctcctcgtc	600
atcttcctgc	tcgtggccaa	catcctgctg	gtcaacttgc	tcattgcat	gttcagttac	660
acattcgcca	aagtacaggg	caacagcgat	ctctactgga	aggcgcagcg	ttaccgcctc	720
atccgggaat	tccactctcg	gcccgcgctg	gccccgcct	ttatcgctcat	ctcccacttg	780
cgccctcctgc	tcaggcaatt	gtgcaggcga	ccccggagcc	cccagccgct	ctcccggcc	840
ctcgagcatt	tccgggttta	cctttctaag	gaagccgagc	ggaagctgct	aacgtgggaa	900
tcggtgcata	aggagaactt	tctgctggca	cgcgctaggg	acaagcgga	gagcgactcc	960
gagcgtctga	agcgcacgtc	ccagaaggtg	gacttggcac	tgaacagct	gggacacatc	1020

cgcgagtagc	aacagcgcct	gaaagtgtct	gagcgggagg	tccagcagt	tagccgcgtc	1080
ctgggtggg	tggccgaggg	cctgagccgc	tctgccttgc	tgcccccagg	tgggcccgcca	1140
ccccctgacc	tgcttgggtc	caaagactga	gccctgtgtg	cggacttcaa	ggagaagccc	1200
ccacagggga	ttttgttcct	agagtaaggc	tcatctgggc	ctcggccccc	gcacctgggtg	1260
gccttgtcct	tgaggtgagc	cccatgtcca	tctggggccac	tgctcaggacc	acctttggga	1320
gtgtcatcct	tacaaaccac	agcatgcccc	gctcctccca	gaaccagtcc	cagcctggga	1380
ggatcaaggc	ctggatcccc	ggccgttatc	catctggagg	ctgcagggtc	cttggggtaa	1440
cagggaccac	agacccctca	ccactcacag	attcctcaca	ctggggaaat	aaagccattt	1500
cagaggaaaa	aaaaaaaaaa	aaaa				1524

<210> 110  
 <211> 3410  
 <212> DNA  
 <213> Homo sapien

<400> 110

gggaaccagc	ctgcacgcgc	tggtctcggg	tgacagccgc	gcgcctcggc	caggatctga	60
gtgatgagac	gtgtccccac	tgaggtgccc	cacagcagca	ggtgttgagc	atgggctgag	120
aagctggacc	ggcaccaaaag	ggctggcaga	aatgggcgcc	tggtgatctc	ctaggcagtt	180
ggcggcagca	aggaggagag	gccgcagctt	ctggagcaga	gccgagacga	agcagttctg	240
gagtgctcga	acggcccccct	gagccctacc	cgccctggccc	actatgggtc	agaggctgtg	300
ggtgagccgc	ctgctgcggc	accggaaagc	ccagctcttg	ctgggtcaacc	tgctaaccctt	360
tggcctggag	gtgtgttttg	ccgcaggcat	cacctatgtg	ccgcctctgc	tgctggaagt	420
gggggtagag	gagaagtcca	tgacctgggt	gctgggcatt	ggtccagtgc	tgggcctggg	480
ctgtgtcccc	ctcctaggct	cagccagtga	ccactggcgt	ggacgctatg	gccgccggcg	540
gcccttcac	tgggcaactgt	ccttgggcat	cctgtgagc	ctctttctca	tcccaagggc	600
cggttggtta	gcagggtgct	tgtgcccga	tcccaggccc	ctggagctgg	cactgctcat	660
cctgggcgtg	gggctgctgg	acttctgtgg	ccaggtgtgc	ttcactccac	tggaggccct	720
gctctctgac	ctcttccggg	acccggacca	ctgtcgccag	gcctactctg	tctatgcctt	780
catgatcagt	cttgggggct	gcctgggcta	cctcctgcct	gccattgact	gggacaccag	840
tgccctggcc	ccctacctgg	gcacccagga	ggagtgcctc	tttggcctgc	tcacctcat	900
cttcctcacc	tgcgttagcag	ccacactgct	ggtggctgag	gaggcagcgc	tgggccccac	960
cgagccagca	gaagggtgtg	cggcccccct	cttgtcgccc	cactgctgtc	catgccgggc	1020
ccgcttggtc	ttccggaaacc	tgggcgcctt	gcttccccgg	ctgcaccagc	tgtgtgcctg	1080
catgccccgc	accctgcgcc	ggctcttcgt	ggctgagctg	tgcagctgga	tggcactcat	1140
gaccttcacg	ctgtttttaca	cggatttcgt	gggcgagggg	ctgtaccagg	gcgtgcccag	1200
agctgagcgg	ggcaccgagg	cccggagaca	ctatgatgaa	ggcggttcgga	tgggcagcct	1260
ggggctgttc	ctgcagtgcg	ccatctccct	ggtcttctct	ctggctcatgg	accgtgcctg	1320
gcagcgattc	ggcactcgag	cagtctatct	ggccagtggt	gcagctttcc	ctgtggctgc	1380
cggtgccaca	tgcctgtccc	acagtgtggc	cgtggtgaca	gcttcagccg	ccctcaccgg	1440
gttcaccttc	tcagccctgc	agatcctgcc	ctacacactg	gcctccctct	accaccggga	1500
gaagcaggtg	ttcctgcccc	aataccgagg	ggacactgga	ggtgctagca	gtgaggacag	1560
cctgatgacc	agcttctctg	caggccctaa	gcctggagct	cccttcccta	atggacacgt	1620
gggtgctgga	ggcagtgggc	tgtctccacc	tccaccggcg	ctctgcgggg	ccctgcctg	1680
tgatgtctcc	gtacgtgtgg	tgggtgggtga	gcccaccgag	gccagggtgg	ttccggggcg	1740
gggcatctgc	ctggacctcg	ccatcctgga	tagtgccctc	ctgctgtccc	aggtggcccc	1800
atccctgttt	atgggctcca	ttgtccagct	cagccagctc	gtcactgcct	atatggtgtc	1860
tcccgcaggg	ctgggtcttg	tgcaccttta	ctttgctaca	caggtagtat	ttgacaagag	1920
cgacttgccc	aaataactcag	cgtagaaaac	ttccagcaca	ttgggggtgga	gggcctgcct	1980
cactgggtcc	cagctccccg	ctcctgttag	ccccatgggg	ctgccgggct	ggccgccagt	2040
ttctgttgct	gccaaagtaa	tgtggctctc	tgtgtccacc	ctgtgctgct	gaggtgcgta	2100
gctgcacagc	tgggggctgg	ggcgccctc	tctctctccc	ccagtctcta	gggctgcctg	2160
actggaggcc	ttccaagggg	gtttcagctg	ggacttatac	agggaggcca	gaagggtccc	2220
atgactgtga	atgcggggac	tctgcagggt	gattacccag	gctcagggtt	aacagctagc	2280
ctcctagtta	agacacacct	agagaagggt	ttttgggagc	tgaataaaact	cagtcacctg	2340
gtttcccatc	tctaagcccc	ttaacctgca	gcttcgttta	atgtagctct	tgcattggag	2400
tttctaggat	gaaacactcc	tccatgggat	ttgaacatat	gacttatttg	taggggaaga	2460
gtcctgaggg	gcaacacaca	agaaccaggt	ccccctcagc	cacagcactg	tctttttgct	2520
gatccacccc	cctcttacct	tttatcagga	tgtggcctgt	tggtccttct	gttgccatca	2580
cagagacaca	ggcattttaa	tatttaactt	attttattta	caaagtagaa	gggaattccat	2640
tgtagctttt	tgtgtgttgg	tgtctaatat	ttgggtaggg	tgggggatcc	ccaacaatca	2700
ggtcccttga	gatagctggt	cattggggctg	atcattgccca	gaatcttctt	ctcctggggg	2760

ctggccccc	aaaatgccta	accagaggacc	ttggaaattc	tactcatccc	aaatgataat	2820
tccaaatgct	gttaccceaag	gttaggggtgt	tgaaggaagg	tagaggggtgg	ggcttcaggt	2880
ctcaacggct	tccctaacca	ccccctcttct	cttggcccag	cctggttccc	cccacttcca	2940
ctccccctcta	ctctctctag	gactgggctg	atgaaggcac	tgcccaaaat	ttccccctacc	3000
cccaactttc	ccctaccccc	aacttttcccc	accagctcca	caaccctgtt	tggagctact	3060
gcaggaccag	aagcacaaaag	tgcggtttcc	caagcctttg	tccatctcag	ccccagagt	3120
atatctgtgc	ttggggaatc	tcacacagaa	actcaggagc	acccctgcc	tgagctaagg	3180
gaggtcttat	ctctcagggg	gggtttaagt	gccgtttgca	ataatgtcgt	cttattttatt	3240
tagcgggggtg	aatatTTTTat	actgtaagt	agcaatcaga	gtataatgtt	tatggtgaca	3300
aaattaaagg	ctttcttata	tgtttaaaaa	aaaaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	3360
aaaaaaaaara	aaaaaaaaaa	aaaaaaaaaa	aaaaaaataa	aaaaaaaaaa		3410

<210> 111  
 <211> 1289  
 <212> DNA  
 <213> Homo sapien

<400> 111						
agccaggcgt	ccctctgcct	gccactcag	tggaacacc	cgggagctgt	tttgtccttt	60
gtggagcctc	agcagttccc	tctttcagaa	ctcactgcc	agagccctga	acaggagcca	120
ccatgcagtg	cttcagcttc	attaagacca	tgatgacct	cttcaatttg	ctcatctttc	180
tgtgtgggtgc	agccctgttg	gcagtgggca	tctgggtgtc	aatcgatggg	gcaccccttc	240
tgaagatctt	cgggccactg	tcgtccagtg	ccatgcagtt	tgtcaacgtg	ggctacttcc	300
tcacgcagc	cggcgtttgt	gtctttgtc	ttggtttct	gggctgctat	ggtgctaaga	360
ctgagagcaa	gtgtgccctc	gtgacgttct	tcttcacct	cctcctcatc	ttcattgctg	420
aggttgcagc	tgctgtggtc	gccttggtgt	acaccacaat	ggctgagcac	ttcctgacgt	480
tgctggtagt	gcctgccatc	aagaaagatt	atggttccca	ggaagacttc	actcaagtgt	540
ggaacaccac	catgaaagg	ctcaagtgt	gtggcttcac	caactatacg	gattttgagg	600
actcacccta	cttcaaagag	aacagtgcct	ttcccccat	ctgttgcaat	gacaacgtca	660
ccaacacagc	caatgaaacc	tgaccaaagc	aaaaggctca	cgaccaaaaa	gtagagggtt	720
gcttcaatca	gcttttgtat	gacatccgaa	ctaattgcag	caccgtgggt	ggtgtggcag	780
ctggaattgg	gggcctcgag	ctggctgcc	tgattgtgtc	catgtatctg	tactgcaatc	840
tacaataagt	ccacttctgc	ctctgccact	actgctgcc	catgggaact	gtgaagaggc	900
accctggcaa	gcagcagtg	ttgggggagg	ggacaggatc	taacaatgtc	acttggggca	960
gaatggacct	gccctttctg	ctccagactt	ggggctagat	agggaccact	ccttttagcg	1020
atgcctgact	ttccttccat	tggtgggtgg	atgggtgggg	ggcattccag	agcctctaag	1080
gtagccagtt	ctgttgccca	ttcccccagt	ctattaaacc	cttgatatgc	cccctaggcc	1140
tagtggtgat	cccagtgtc	tactggggga	tgagagaaag	gcattttata	gcctgggcat	1200
aagtgaatc	agcagagcct	ctgggtggat	gtgtagaagg	cacttcaaaa	tgcataaacc	1260
tgttacaatg	ttaaaaaaa	aaaaaaaaa				1289

<210> 112  
 <211> 315  
 <212> PRT  
 <213> Homo sapien

<400> 112															
Met	Val	Phe	Thr	Val	Arg	Leu	Leu	His	Ile	Phe	Thr	Val	Asn	Lys	Gln
1				5				10					15		
Leu	Gly	Pro	Lys	Ile	Val	Ile	Val	Ser	Lys	Met	Met	Lys	Asp	Val	Phe
			20					25					30		
Phe	Phe	Leu	Phe	Phe	Leu	Gly	Val	Trp	Leu	Val	Ala	Tyr	Gly	Val	Ala
			35				40					45			
Thr	Glu	Gly	Leu	Leu	Arg	Pro	Arg	Asp	Ser	Asp	Phe	Pro	Ser	Ile	Leu
			50				55				60				
Arg	Arg	Val	Phe	Tyr	Arg	Pro	Tyr	Leu	Gln	Ile	Phe	Gly	Gln	Ile	Pro
65					70				75					80	
Gln	Glu	Asp	Met	Asp	Val	Ala	Leu	Met	Glu	His	Ser	Asn	Cys	Ser	Ser
				85					90					95	
Glu	Pro	Gly	Phe	Trp	Ala	His	Pro	Pro	Gly	Ala	Gln	Ala	Gly	Thr	Cys
			100					105					110		
Val	Ser	Gln	Tyr	Ala	Asn	Trp	Leu	Val	Val	Leu	Leu	Leu	Val	Ile	Phe



```

      115              120              125
Leu Leu Val Ala Asn Ile Leu Leu Val Asn Leu Leu Ile Ala Met Phe
      130              135              140
Ser Tyr Thr Phe Gly Lys Val Gln Gly Asn Ser Asp Leu Tyr Trp Lys
      145              150              155              160
Ala Gln Arg Tyr Arg Leu Ile Arg Glu Phe His Ser Arg Pro Ala Leu
      165              170              175
Ala Pro Pro Phe Ile Val Ile Ser His Leu Arg Leu Leu Leu Arg Gln
      180              185              190
Leu Cys Arg Arg Pro Arg Ser Pro Gln Pro Ser Ser Pro Ala Leu Glu
      195              200              205
His Phe Arg Val Tyr Leu Ser Lys Glu Ala Glu Arg Lys Leu Leu Thr
      210              215              220
Trp Glu Ser Val His Lys Glu Asn Phe Leu Leu Ala Arg Ala Arg Asp
      225              230              235              240
Lys Arg Glu Ser Asp Ser Glu Arg Leu Lys Arg Thr Ser Gln Lys Val
      245              250              255
Asp Leu Ala Leu Lys Gln Leu Gly His Ile Arg Glu Tyr Glu Gln Arg
      260              265              270
Leu Lys Val Leu Glu Arg Glu Val Gln Gln Cys Ser Arg Val Leu Gly
      275              280              285
Trp Val Ala Glu Ala Leu Ser Arg Ser Ala Leu Leu Pro Pro Gly Gly
      290              295              300
Pro Pro Pro Pro Asp Leu Pro Gly Ser Lys Asp
      305              310              315

```

<210> 113  
 <211> 553  
 <212> PRT  
 <213> Homo sapien

```

      <400> 113
Met Val Gln Arg Leu Trp Val Ser Arg Leu Leu Arg His Arg Lys Ala
      1              5              10              15
Gln Leu Leu Leu Val Asn Leu Leu Thr Phe Gly Leu Glu Val Cys Leu
      20              25              30
Ala Ala Gly Ile Thr Tyr Val Pro Pro Leu Leu Leu Glu Val Gly Val
      35              40              45
Glu Glu Lys Phe Met Thr Met Val Leu Gly Ile Gly Pro Val Leu Gly
      50              55              60
Leu Val Cys Val Pro Leu Gly Ser Ala Ser Asp His Trp Arg Gly
      65              70              75              80
Arg Tyr Gly Arg Arg Arg Pro Phe Ile Trp Ala Leu Ser Leu Gly Ile
      85              90              95
Leu Leu Ser Leu Phe Leu Ile Pro Arg Ala Gly Trp Leu Ala Gly Leu
      100              105              110
Leu Cys Pro Asp Pro Arg Pro Leu Glu Leu Ala Leu Leu Ile Leu Gly
      115              120              125
Val Gly Leu Leu Asp Phe Cys Gly Gln Val Cys Phe Thr Pro Leu Glu
      130              135              140
Ala Leu Leu Ser Asp Leu Phe Arg Asp Pro Asp His Cys Arg Gln Ala
      145              150              155              160
Tyr Ser Val Tyr Ala Phe Met Ile Ser Leu Gly Gly Cys Leu Gly Tyr
      165              170              175
Leu Leu Pro Ala Ile Asp Trp Asp Thr Ser Ala Leu Ala Pro Tyr Leu
      180              185              190
Gly Thr Gln Glu Glu Cys Leu Phe Gly Leu Leu Thr Leu Ile Phe Leu
      195              200              205
Thr Cys Val Ala Ala Thr Leu Val Ala Glu Glu Ala Ala Leu Gly
      210              215              220
Pro Thr Glu Pro Ala Glu Gly Leu Ser Ala Pro Ser Leu Ser Pro His
      225              230              235              240

```

Cys Cys Pro Cys Arg Ala Arg Leu Ala Phe Arg Asn Leu Gly Ala Leu  
 245 250 255  
 Leu Pro Arg Leu His Gln Leu Cys Cys Arg Met Pro Arg Thr Leu Arg  
 260 265 270  
 Arg Leu Phe Val Ala Glu Leu Cys Ser Trp Met Ala Leu Met Thr Phe  
 275 280 285  
 Thr Leu Phe Tyr Thr Asp Phe Val Gly Glu Gly Leu Tyr Gln Gly Val  
 290 295 300  
 Pro Arg Ala Glu Pro Gly Thr Glu Ala Arg Arg His Tyr Asp Glu Gly  
 305 310 315 320  
 Val Arg Met Gly Ser Leu Gly Leu Phe Leu Gln Cys Ala Ile Ser Leu  
 325 330 335  
 Val Phe Ser Leu Val Met Asp Arg Leu Val Gln Arg Phe Gly Thr Arg  
 340 345 350  
 Ala Val Tyr Leu Ala Ser Val Ala Ala Phe Pro Val Ala Ala Gly Ala  
 355 360 365  
 Thr Cys Leu Ser His Ser Val Ala Val Val Thr Ala Ser Ala Ala Leu  
 370 375 380  
 Thr Gly Phe Thr Phe Ser Ala Leu Gln Ile Leu Pro Tyr Thr Leu Ala  
 385 390 395 400  
 Ser Leu Tyr His Arg Glu Lys Gln Val Phe Leu Pro Lys Tyr Arg Gly  
 405 410 415  
 Asp Thr Gly Gly Ala Ser Ser Glu Asp Ser Leu Met Thr Ser Phe Leu  
 420 425 430  
 Pro Gly Pro Lys Pro Gly Ala Pro Phe Pro Asn Gly His Val Gly Ala  
 435 440 445  
 Gly Gly Ser Gly Leu Leu Pro Pro Pro Ala Leu Cys Gly Ala Ser  
 450 455 460  
 Ala Cys Asp Val Ser Val Arg Val Val Val Gly Glu Pro Thr Glu Ala  
 465 470 475 480  
 Arg Val Val Pro Gly Arg Gly Ile Cys Leu Asp Leu Ala Ile Leu Asp  
 485 490 495  
 Ser Ala Phe Leu Leu Ser Gln Val Ala Pro Ser Leu Phe Met Gly Ser  
 500 505 510  
 Ile Val Gln Leu Ser Gln Ser Val Thr Ala Tyr Met Val Ser Ala Ala  
 515 520 525  
 Gly Leu Gly Leu Val Ala Ile Tyr Phe Ala Thr Gln Val Val Phe Asp  
 530 535 540  
 Lys Ser Asp Leu Ala Lys Tyr Ser Ala  
 545 550

&lt;210&gt; 114

&lt;211&gt; 241

&lt;212&gt; PRT

&lt;213&gt; Homo sapien

&lt;400&gt; 114

Met Gln Cys Phe Ser Phe Ile Lys Thr Met Met Ile Leu Phe Asn Leu  
 1 5 10 15  
 Leu Ile Phe Leu Cys Gly Ala Ala Leu Ala Val Gly Ile Trp Val  
 20 25 30  
 Ser Ile Asp Gly Ala Ser Phe Leu Lys Ile Phe Gly Pro Leu Ser Ser  
 35 40 45  
 Ser Ala Met Gln Phe Val Asn Val Gly Tyr Phe Leu Ile Ala Ala Gly  
 50 55 60  
 Val Val Val Phe Ala Leu Gly Phe Leu Gly Cys Tyr Gly Ala Lys Thr  
 65 70 75 80  
 Glu Ser Lys Cys Ala Leu Val Thr Phe Phe Phe Ile Leu Leu Leu Ile  
 85 90 95  
 Phe Ile Ala Glu Val Ala Ala Ala Val Ala Leu Val Tyr Thr Thr  
 100 105 110  
 Met Ala Glu His Phe Leu Thr Leu Leu Val Val Pro Ala Ile Lys Lys

115	120	125
Asp Tyr Gly Ser Gln Glu Asp Phe Thr Gln Val Trp Asn Thr Thr Met		
130	135	140
Lys Gly Leu Lys Cys Cys Gly Phe Thr Asn Tyr Thr Asp Phe Glu Asp		
145	150	155
Ser Pro Tyr Phe Lys Glu Asn Ser Ala Phe Pro Pro Phe Cys Cys Asn		
165	170	175
Asp Asn Val Thr Asn Thr Ala Asn Glu Thr Cys Thr Lys Gln Lys Ala		
180	185	190
His Asp Gln Lys Val Glu Gly Cys Phe Asn Gln Leu Leu Tyr Asp Ile		
195	200	205
Arg Thr Asn Ala Val Thr Val Gly Gly Val Ala Ala Gly Ile Gly Gly		
210	215	220
Leu Glu Leu Ala Ala Met Ile Val Ser Met Tyr Leu Tyr Cys Asn Leu		
225	230	235
Gln		240

<210> 115  
 <211> 366  
 <212> DNA  
 <213> Homo sapien

<400> 115

gctctttctc	tcccctcctc	tgaatttaaat	tcttttcaact	tgcaatttgc	aaggattaca	60
catttcactg	tgatgtatat	tgtgttgcaa	aaaaaaaaaa	gtgtctttgt	ttaaaattac	120
ttggtttggt	aatccatctt	gctttttccc	cattggaact	agtcattaac	ccatctctga	180
actggtagaa	aaacatctga	agagctagtc	tatcagcattc	tgacaggtga	attggatggt	240
tctcagaacc	atttcaccca	gacagcctgt	ttctatcctg	tttaataaat	tagtttgggt	300
tctctacatg	cataacaaac	cctgctccaa	tctgtcacat	aaaagtctgt	gacttgaagt	360
ttagtc						366

<210> 116  
 <211> 282  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(282)  
 <223> n = A,T,C or G

<400> 116

acaaagatga	accatttcct	atattatagc	aaaattaaaa	tctaccgta	ttctaattatt	60
gagaaatgag	atnaaacaca	atnttataaa	gtctacttag	agaagatcaa	gtgacctcaa	120
agactttact	atnttcatat	tttaagacac	atgatttatc	ctatttttagt	aacctgggtc	180
atacggttaa	caaaggataa	tgtgaacagc	agagaggatt	tgttggcaga	aatctatgt	240
tcaatctnga	actatctana	tcacagacat	ttctattcct	tt		282

<210> 117  
 <211> 305  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(305)  
 <223> n = A,T,C or G

<400> 117

acacatgtcg	cttctactgcc	ttcttagatg	cttctgggtca	acatanagga	acagggacca	60
tatttatcct	ccctcctgaa	acaattgcaa	aataanacaa	aatatatgaa	acaattgcaa	120

aataaggcaa aatatatgaa acaacaggtc tcgagatatt ggaaatcagt caatgaagga	180
tactgatccc tgatcactgt cctaattgcag gatgtgggaa acagatgagg tcacctctgt	240
gactgcccc gcttactgcc tgtagagagt ttctangctg cagttcagac agggagaaat	300
tggt	305

<210> 118  
 <211> 71  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(71)  
 <223> n = A,T,C or G

<400> 118	
accaaggtgt ntgaatctct gacgtgggga tctctgattc ccgcacaatc tgagtggaaa	60
aantcctggg t	71

<210> 119  
 <211> 212  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(212)  
 <223> n = A,T,C or G

<400> 119	
actccggttg gtgtcagcag cacgtggcat tgaacatngc aatgtggagc ccaaaccaca	60
gaaaatgggg tgaaattggc caactttcta tnaacttatg ttggcaantt tgccaccaac	120
agtaagctgg cccttctaataaaaagaaaat tgaaaggttt ctcactaanc ggaattaant	180
aatggantca aganactccc aggcctcagc gt	212

<210> 120  
 <211> 90  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(90)  
 <223> n = A,T,C or G

<400> 120	
actcggttgca natcaggggc ccccagagt caccggttgca ggagtccttc tggctcttgcc	60
ctccgccggc gcagaacatg ctggggtggt	90

<210> 121  
 <211> 218  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(218)  
 <223> n = A,T,C or G

<400> 121	
tgtancgtga anacgacaga naggggtgtc aaaaatggag aanccttgaa gtcattttga	60
gaataagatt tgctaaaaga tttggggcta aaacatggtt attgggagac atttctgaag	120

atatncangt aaattangga atgaattcat ggttcttttg ggaattcctt tacgatngcc 180  
agcatanact tcatgtgggg atancagcta cccttgta 218

<210> 122  
<211> 171  
<212> DNA  
<213> Homo sapien

<400> 122  
taggggtgta tgcaactgta aggacaaaaa ttgagactca actggcttaa ccaataaagg 60  
catttgtag ctcattggaac aggaagtcgg atggtggggc atcttcagtg ctgcatgagt 120  
caccaccccg gcgggggtcat ctgtgccaca ggtccctgtt gacagtgcgg t 171

<210> 123  
<211> 76  
<212> DNA  
<213> Homo sapien

<220>  
<221> misc\_feature  
<222> (1)...(76)  
<223> n = A,T,C or G

<400> 123  
tgtagcgtga agacnacaga atggtgtgtg ctgtgctatc caggaacaca tttattatca 60  
ttatcaanta ttgtgt 76

<210> 124  
<211> 131  
<212> DNA  
<213> Homo sapien

<400> 124  
acctttcccc aaggccaatg tcctgtgtgc taactggccg gctgcaggac agctgcaatt 60  
caatgtgctg ggtcatatgg aggggaggag actctaaaat agccaatttt attctcttgg 120  
ttaagatttg t 131

<210> 125  
<211> 432  
<212> DNA  
<213> Homo sapien

<400> 125  
actttatcta ctggctatga aatagatggt ggaaaattgc gttaccaact ataccactgg 60  
cttgaaaaag aggtgatagc tcttcagagg acttgtgact tttgctcaga tgctgaagaa 120  
ctacagtctg catttggcag aaatgaagat gaatttggat taaatgagga tgctgaagat 180  
ttgcctcacc aaacaaaagt gaaacaactg agagaaaatt ttcaggaaaa aagacagtgg 240  
ctcttgaagt atcagtcact tttgagaatg tttcttagtt actgcatact tcatggatcc 300  
catggtgggg gtcttgcac tgtaagaatg gaattgattt tgcttttgca agaattctcag 360  
caggaaacat cagaaccact attttctagc cctctgtcag agcaaaccct agtgccctctc 420  
ctctttgctt gt 432

<210> 126  
<211> 112  
<212> DNA  
<213> Homo sapien

<400> 126  
acacaacttg aatagtaaaa tagaaactga gctgaaattt ctaattcact ttctaaccat 60  
agtaagaatg atatttcccc ccagggatca ccaaatattt ataaaaattt gt 112

<210> 127

<211> 54  
<212> DNA  
<213> Homo sapien

<400> 127

accacgaaac cacaacaag atggaagcat caatccactt gccaaagcaca gcag

54

<210> 128  
<211> 323  
<212> DNA  
<213> Homo sapien

<400> 128

acctcattag taattgtttt gttgtttcat ttttttctaa tgtctccctt ctaccagctc	60
acctgagata acagaatgaa aatggaagga cagccagatt tctcctttgc tctctgctca	120
ttctctctga agtctagggt acccattttg gggacccatt ataggcaata aacacagttc	180
ccaaagcatt tggacagttt cttgtttgtg tttagaatgg ttttcctttt tcttagcctt	240
ttctgcaaaa aggtcactc agtcccttgc ttgtcagtg gactgggctc cccagggcct	300
aggtgcctt cttttccatg tcc	323

<210> 129  
<211> 192  
<212> DNA  
<213> Homo sapien

<220>

<221> misc\_feature  
<222> (1)...(192)  
<223> n = A,T,C or G

<400> 129

acatacatgt gtgtatatatt ttaaatatca cttttgtatc actctgactt tttagcatac	60
tgaaaacaca ctaacataat ttntgtgaac catgatcaga tacaacccaa atcattcatc	120
tagcacattc atctgtgata naaagatagg tgagtttcat ttccttcacg ttggccaatg	180
gataaacaaa gt	192

<210> 130  
<211> 362  
<212> DNA  
<213> Homo sapien

<220>

<221> misc\_feature  
<222> (1)...(362)  
<223> n = A,T,C or G

<400> 130

ccctttttta tggaaatgagt agactgtatg tttgaanatt tanccacaac ctctttgaca	60
tataatgacg caacaaaaag gtgctgttta gtcctatggg tcagtttatg cccctgacaa	120
gtttccattg tgttttgccc atcttctggc taatcgtggg atcctccatg ttattagtaa	180
ttctgtattc ctttttgtaa acgcttggtg gatgtaacct gctangaggc taactttata	240
cttatttaaa agctcttatt ttgtgggtcat taaaatggca atttatgtgc agcactttat	300
tgacgcagga agcacgtgtg gggttggtgt aaagctcttt gctaattctta aaaagtaatg	360
gg	362

<210> 131  
<211> 332  
<212> DNA  
<213> Homo sapien

<220>

<221> misc\_feature

&lt;222&gt; (1)...(332)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 131

ctttttgaaa gatcgtgtcc actcctgtgg acatcttgtt ttaatggagt ttcccatgca	60
gtangactgg tatggttgca gctgtccaga taaaaacatt tgaagagctc caaaatgaga	120
gttctcccag gttcgccctg ctgctccaag tctcagcagc agcctctttt aggaggcatc	180
ttctgaacta gattaaggca gcttgtaaat ctgatgtgat ttggtttatt atccaactaa	240
cttccatctg ttatcactgg agaaagccca gactccccan gacnggtacg gattgtgggc	300
atanaaggat tgggtgaagc tggcgttgtg gt	332

&lt;210&gt; 132

&lt;211&gt; 322

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(322)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 132

acttttgcca ttttgtatat ataaacaatc ttgggacatt ctctgaaaa ctaggtgtcc	60
agtggctaag agaactcgat ttcaagcaat tctgaaagga aaaccagcat gacacagaat	120
ctcaaattcc caaacagggg ctctgtggga aaaatgaggg aggacctttg tatctcgggt	180
tttagcaagt taaaatgaan atgacaggaa aggccttatt atcaacaaag agaagagttg	240
ggatgcttct aaaaaaaact ttggtagaga aaataggaat gctnaatcct agggaagcct	300
gtaacaatct acaattggtc ca	322

&lt;210&gt; 133

&lt;211&gt; 278

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(278)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 133

acaagccttc acaagtttaa ctaaattggg attaatcttt ctgtanttat ctgcataatt	60
cttggttttc tttccatctg gctcctgggt tgacaatttg tggaaacaac tctattgcta	120
ctatttaaaa aaaatcacaa atctttccct ttaagctatg ttnaattcaa actattcctg	180
ctattcctgt tttgtcaaag aaattatatt tttcaaaata tgtntatttg tttgatgggt	240
cccacgaaac actaataaaa accacagaga ccagcctg	278

&lt;210&gt; 134

&lt;211&gt; 121

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(121)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 134

gtttanaaaa ctgttttagc tccatagagg aaagaatggt aaactttgta ttttaaaaca	60
tgattctctg aggttaaact tggttttcaa atgttatttt tacttgtatt ttgcttttgg	120
t	121

&lt;210&gt; 135

<211> 350  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(350)  
 <223> n = A,T,C or G

<400> 135  
 acttanaacc atgcctagca catcagaatc cctcaaagaa catcagtata atcctataacc 60  
 atancaagtg gtgactgggt aagcgtgcga caaagggtcag ctggcacatt acttgtgtgc 120  
 aaacttgata cttttgttct aagtaggaac tagtatacag tncctaggan tgggtactcca 180  
 ggggtgcccc caactcctgc agccgctcct ctgtgccagn ccctgnaagg aactttcgct 240  
 ccacctcaat caagccctgg gccatgctac ctgcaattgg ctgaacaaac gtttgcgtgag 300  
 ttcccaagga tgcaaagcct ggtgctcaac tcctggggcg tcaactcagt 350

<210> 136  
 <211> 399  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(399)  
 <223> n = A,T,C or G

<400> 136  
 tgtaccgtga agacgacaga agttgcatgg cagggacagg gcagggccga ggccagggtt 60  
 gctgtgattg tatccgaata ntccctcgtga gaaaagataa tgagatgacg tgagcagcct 120  
 gcagacttgt gtctgccttc aanaagccag acaggaaggc cctgcctgcc ttggctctga 180  
 cctggcggcc agccagccag ccacagggtgg gcttcttctt tttgtggtga caacnccaag 240  
 aaaactgcag agggcccagg tcagggtgtna gtgggtangt gaccataaaa caccagggtgc 300  
 tcccaggaac ccgggcaaag gccatcccca cctacagcca gcatgcccac tggcgtgatg 360  
 ggtgcagang gatgaagcag ccagntgttc tgctgtggt 399

<210> 137  
 <211> 165  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(165)  
 <223> n = A,T,C or G

<400> 137  
 actggtgtgg tngggggtga tgctggtggt anaagttgan gtgacttcan gatggtgtgt 60  
 ggaggaagtg tgtgaacgta gggatgtaga ngttttggcc gtgctaaatg agcttcggga 120  
 ttggctgggtc ccactgggtg tcactgtcat tgggtggggt cctgt 165

<210> 138  
 <211> 338  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(338)  
 <223> n = A,T,C or G

<400> 138



actcactgga	atgccacatt	cacaacagaa	tcagaggtct	gtgaaaacat	taatggctcc	60
ttaacttctc	cagtaagaat	cagggacttg	aaatggaaac	gttaacagcc	acatgcccac	120
tgctgggcag	tctcccatgc	cttccacagt	gaaagggtt	gagaaaaatc	acatccaatg	180
tcatgtgttt	ccagccacac	caaaagggtgc	ttgggggtga	gggctggggg	catananggt	240
cangcctcag	gaagcctcaa	gttccattca	gctttgccac	tgtacattcc	ccatntttaa	300
aaaaactgat	gccttttttt	tttttttttg	taaaattc			338

&lt;210&gt; 139

&lt;211&gt; 382

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 139

gggaatcttg	gtttttggca	tctggtttgc	ctatagccga	ggccactttg	acagaacaaa	60
gaaagggact	tcgagtaaga	aggtgattta	cagccagcct	agtgcccgaa	gtgaaggaga	120
attcaaacag	acctcgatcat	tcctggtgtg	agcctgggtcg	gctcaccgcc	tatcatctgc	180
atttgccctta	ctcaggtgct	accggactct	ggcccctgat	gtctgtagtt	tcacaggatg	240
ccttattttgt	cttctacacc	ccacagggcc	ccctacttct	tcggatgtgt	ttttaataat	300
gtcagctatg	tgccccatcc	tccttcatgc	cctccctccc	tttctacca	ctgctgagtg	360
gcctggaact	tgtttaaagt	gt				382

&lt;210&gt; 140

&lt;211&gt; 200

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(200)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 140

accaaancctt	ctttctgttg	tgttngattt	tactataggg	gtttngcttn	ttctaaanat	60
acttttcatt	taacancttt	tgtaagtgt	caggctgcac	tttgctccat	anaattattg	120
ttttcacatt	tcaacttgta	tggtttgtc	tcttanagca	ttggtgaaat	cacatatttt	180
atattcagca	taaaggagaa					200

&lt;210&gt; 141

&lt;211&gt; 335

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(335)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 141

actttatttt	caaaacactc	atatgttgca	aaaaacacat	agaaaaataa	agtttggtgg	60
gggtgctgac	taaacttcaa	gtcacagact	tttatgtgac	agattggagc	agggtttggt	120
atgcatgtag	agaacccaaa	ctaattttatt	aaacaggata	gaaacaggct	gtctgggtga	180
aatggttctg	agaaccatcc	aattcacctg	tcagatgctg	atanactagc	tcttcagatg	240
tttttctacc	agttcagaga	tnggttaatg	actanttcca	atggggaaaa	agcaagatgg	300
attcacaaac	caagtaattt	taaacaaaga	cactt			335

&lt;210&gt; 142

&lt;211&gt; 459

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(459)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 142

accagggttaa	tattgccaca	tatatccttt	ccaattgcgg	gctaaacaga	cgtgtattta	60
gggttggtta	aagacaaccc	agcttaatat	caagagaaat	tgtgaccttt	catggagtat	120
ctgatggaga	aaacactgag	ttttgacaaa	tcttatttta	ttcagatagc	agtctgatca	180
cacatgggcc	aacaacactc	aaataataaa	tcaaataatna	tcagatgtta	aagattgggc	240
ttcaaacatc	atagccaatg	atgccccgct	tgcctataat	ctctccgaca	taaaaccaca	300
tcaacacctc	agtggccacc	aaaccattca	gcacagcttc	cttaactgtg	agctgtttga	360
agctaccagt	ctgagcacta	ttgactatnt	ttttcangct	ctgaatagct	ctagggatct	420
cagcangggg	gggaggaacc	agctcaacct	tggcgtant			459

&lt;210&gt; 143

&lt;211&gt; 140

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 143

acatttcctt	ccaccaagtc	aggactcctg	gcttctgtgg	gagttcttat	cacctgaggg	60
aaatccaaac	agtctctcct	agaaaggaat	agtgtcacca	accccaccca	tctccctgag	120
accatccgac	ttccctgtgt					140

&lt;210&gt; 144

&lt;211&gt; 164

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(164)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 144

acttcagtaa	caacatacaa	taacaacatt	aagtgtatat	tgccatcttt	gtcattttct	60
atctatacca	ctctcccttc	tgaaaacaan	aatcactanc	caatcactta	tacaaatttg	120
aggcaattaa	tccatatttg	ttttcaataa	ggaaaaaag	atgt		164

&lt;210&gt; 145

&lt;211&gt; 303

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(303)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 145

acgtagacca	tccaactttg	tatttgtaat	ggcaaacatc	cagnagcaat	tcctaaacaa	60
actggagggt	atttataccc	aattatccca	ttcattaaca	tgccctcctc	ctcaggctat	120
gcaggacagc	tatcataagt	cggcccaggc	atccagatac	taccatttgt	ataaacttca	180
gtaggggagt	ccatccaagt	gacaggtcta	atcaaaggag	gaaatggaac	ataagcccag	240
tagtaaaatn	ttgcttagct	gaaacagcca	caaaagactt	accgccgtgg	tgattaccat	300
caa						303

&lt;210&gt; 146

&lt;211&gt; 327

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

<221> misc\_feature  
 <222> (1)...(327)  
 <223> n = A,T,C or G

<400> 146  
 actgcagctc aattagaagt ggtctctgac tttcatcanc ttctccctgg gctccatgac 60  
 actggcctgg agtgactcat tgcctctggt gggttgagaga gtcctttgac caacaggcct 120  
 ccaagtcagg gctgggattt gtttcccttc cacattctag caacaatatg ctggccactt 180  
 cctgaacagg gaggggtgga ggagccagca tggaacaagc tgccactttc taaagtagcc 240  
 agacttgccc ctgggcctgt cacacctact gatgaccttc tgtgcctgca ggatggaatg 300  
 taggggtgag ctgtgtgact ctatgggt 327

<210> 147  
 <211> 173  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(173)  
 <223> n = A,T,C or G

<400> 147  
 acattgtttt tttagataa agcattgana gagctctcct taacgtgaca caatggaagg 60  
 actggaacac ataccacat ctttgttctg agggataatt ttctgataaa gtcttgctgt 120  
 atattcaagc acatatgtta tatattattc agttccatgt ttatagccta gtt 173

<210> 148  
 <211> 477  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(477)  
 <223> n = A,T,C or G

<400> 148  
 acaaccactt tatctcatcg aatttttaac ccaaactcac tcaactgtgcc tttctatcct 60  
 atgggatata ttatttgatg ctccatttca tcacacatat atgaataata cactcactact 120  
 gccctactac ctgctgcaat aatcacattc ccttcctgtc ctgacctga agccattggg 180  
 gtggtcctag tggccatcag tccangcctg caccttgagc ccttgagctc cattgctcac 240  
 nccanccac ctcaccgacc ccatcctctt acacagctac ctcccttgctc tctaacccca 300  
 tagattatnt ccaaattcag tcaattaagt tactattaac actctaccg acatgtccag 360  
 caccactggt aagccttctc cagccaacac acacacacac acacncacac acacacatat 420  
 ccaggcacag gctacctcat cttcacaatc acccctttaa ttaccatgct atggtgg 477

<210> 149  
 <211> 207  
 <212> DNA  
 <213> Homo sapien

<400> 149  
 acagttgtat tataatatca agaaataaac ttgcaatgag agcattttaag agggaagaac 60  
 taacgtatatt tagagagcca aggaagggtt ctgtggggag tgggatgtaa ggtggggcct 120  
 gatgataaat aagagtcagc caggtaagtg ggtgggtgtg tatgggcaca gtgaagaaca 180  
 tttcaggcag agggaacagc agtgaaa 207

<210> 150  
 <211> 111  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(111)  
 <223> n = A,T,C or G

<400> 150  
 accttgattt cattgctgct ctgatggaaa cccaactatc taatttagct aaaacatggg 60  
 cacttaaagt tggtcagtgt ttggacttgt taactantgg catctttggg t 111

<210> 151  
 <211> 196  
 <212> DNA  
 <213> Homo sapien

<400> 151  
 agcgcggcag gtcattatga acattccaga tacctatcat tactcgatgc tgttgataac 60  
 agcaagatgg ctttgaactc agggtcacca ccagctattg gaccttacta tgaaaaccat 120  
 ggataccaac cggaaaaccc ctatcccgca cagccactg tggccccac tgtctacgag 180  
 gtgcatccgg ctacagt 196

<210> 152  
 <211> 132  
 <212> DNA  
 <213> Homo sapien

<400> 152  
 acagcacttt cacatgtaag aaggggagaaa ttccctaaatg taggagaaaag ataacagaaac 60  
 cttcccccttt tcatctagtgt gtggaaacct gatgctttat gttgacagga atagaaccag 120  
 gagggagttt gt 132

<210> 153  
 <211> 285  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(285)  
 <223> n = A,T,C or G

<400> 153  
 acaanaccca nganaggcca ctggccgtgg tgtcatggcc tccaaacatg aaagtgtcag 60  
 cttctgtctt tatgtcctca tctgacaact ctttaccatt tttatcctcg ctacagcagga 120  
 gcacatcaat aaagtccaaa gtcttggact tggccttggc ttggaggaag tcatcaaacac 180  
 cctggctagt gaggggtgcg cgccgtctct ggatgacggc atctgtgaag tcgtgcacca 240  
 gtctgcaggc cctgtggaag cgccgtccac acggagtnag gaatt. 285

<210> 154  
 <211> 333  
 <212> DNA  
 <213> Homo sapien

<400> 154  
 accacagtcc tgttgggcca gggcttcatg accctttctg tgaaaagcca tattatcacc 60  
 accccaaatt tttccttaaa tatctttaac tgaaggggtc agcctcttga ctgcaaagac 120  
 cctaagccgg ttacacagct aactcccact ggccctgatt tgtgaaattg ctgctgcctg 180  
 attggcacag gagtcgaagg tgttcagctc ccctcctccg tggaaacgaga ctctgatttg 240  
 agtttcacaa attctcgggc cacctcgctc ttgctcctct gaaataaaat ccggagaaatg 300  
 gtcaggccctg tctcatccat atggatcttc cgg 333

<210> 155

<211> 308  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(308)  
 <223> n = A,T,C or G

<400> 155  
 actggaaata ataaaaccca catcacagtg ttgtgtcaaa gatcatcagg gcatggatgg 60  
 gaaagtgtt tgggaactgt aaagtgccta acacatgatc gatgattttt gttataatat 120  
 ttgaatcacg gtgcatacaa actctcctgc ctgctcctcc tgggccccag cccagcccc 180  
 atcacagctc actgctctgt tcatccaggc ccagcatgta gtggctgatt cttcttggtc 240  
 gcttttagcc tccanaagtt tctctgaagc caaccaaacc tctangtgta aggcattgctg 300  
 gccctggt 308

<210> 156  
 <211> 295  
 <212> DNA  
 <213> Homo sapien

<400> 156  
 accttgctcg gtgcttggaa catattagga actcaaaata tgagatgata acagtgccta 60  
 ttattgatta ctgagagaaac tgtagacat ttagtgaag attttctaca caggaactga 120  
 gaataggaga ttatgtttgg cctcatatt ctctcctatc ctcttgctc cattctatgt 180  
 ctaatatatt ctcaatcaaa taagggttagc ataatcagga aatcgaccaa ataccaatat 240  
 aaaaccagat gtctatcctt aagattttca aatagaaaac aaattaacag actat 295

<210> 157  
 <211> 126  
 <212> DNA  
 <213> Homo sapien

<400> 157  
 acaagtttaa atagtgtgt cactgtgcat gtgctgaaat gtgaaatcca ccacatttct 60  
 gaagagcaaa acaaattctg tcatgtaatc tctatcttgg gtcgtgggta tatctgtccc 120  
 cttagt 126

<210> 158  
 <211> 442  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(442)  
 <223> n = A,T,C or G

<400> 158  
 acccactggt cttggaaaca cccatcctta atacgatgat ttttctgtcg tgtgaaaatg 60  
 aanccagcag gctgccccta gtcagtcctt ccttcagag aaaaagagat ttgagaaagt 120  
 gcctgggtaa ttcaccatta atttcctccc ccaaactctc tgagtcttcc cttaatattt 180  
 ctgggtggtc tgaccaaagc aggtcatggt ttgttgagca tttgggatcc cagtgaagta 240  
 natgtttgta gccttgcata cttagccctt ccacgcaca aacggagtgg cagagtgggtg 300  
 ccaaccctgt tttcccagtc cacgtagaca gattcacagt gcggaattct ggaagctgga 360  
 nacagacggg ctctttgcag agccgggact ctgagangga catgagggcc tctgcctctg 420  
 tgttcattct ctgatgtcct gt 442

<210> 159  
 <211> 498  
 <212> DNA

<213> Homo sapien

<220>

<221> misc\_feature

<222> (1)...(498)

<223> n = A,T,C or G

<400> 159

acttccaggt aacgttggtg tttccgttga gcctgaactg atgggtgacg ttgtagggtc	60
tccaacaaga actgaggttg cagagcgggt aggggaagagt gctgttccag ttgcacctgg	120
gctgctgtgg actgttggtg attcctcact acggcccaag gttgtggaac tggcanaaaag	180
gtgtgtgtgt gganttgagc tcgggcggct gtggtagggt gtgggctctt caacaggggc	240
tgctgtgggt cggggangtg aangtggtgt gtcacttgag ctgggccagc tctggaaagt	300
antanattct tcctgaaggc cagcgccttg ggagctggca ngggtcantg ttgtgtgtaa	360
cgaaccagtg ctgctgtggg tgggtgtana tcctccacaa agcctgaagt tatggtgctn	420
tcaggttaana atgtgggttc agtgtccctg ggcngctgtg gaagggtgta nattgtcacc	480
aagggaataa gctgtggt	498

<210> 160

<211> 380

<212> DNA

<213> Homo sapien

<220>

<221> misc\_feature

<222> (1)...(380)

<223> n = A,T,C or G

<400> 160

acctgcatcc agcttccctg ccaaactcac aaggagacat caacctctag acagggaaac	60
agcttcagga tacttccagg agacagagcc accagcagca aaacaaatat tcccatgcct	120
ggagcatggc atagaggaag ctganaaatg tggggctctga ggaagccatt tgagtctggc	180
cactagacat ctcatcagcc acttgtgtga agagatgccc catgacccca gatgcctctc	240
ccacccttac ctccatctca cacacttgag ctttccactc tgtataattc taacatcctg	300
gagaaaaatg gcagtttgac cgaacctgtt cacaacggta gaggctgatt tctaacgaaa	360
cttgtagaat gaagcctgga	380

<210> 161

<211> 114

<212> DNA

<213> Homo sapien

<400> 161

actccacatc ccctctgagc aggcggttgt cgttcaaggt gtatttgccc ttgcctgtca	60
cactgtccac tggccctta tccacttggt gcttaatccc tcgaaagagc atgt	114

<210> 162

<211> 177

<212> DNA

<213> Homo sapien

<400> 162

actttctgaa tcgaatcaaa tgatacttag tgtagtttta ataccctcat atatatcaaa	60
gttttactac tctgataatt ttgtaaacca ggtaaccaga acatccagtc atacagcttt	120
tggtgatata taacttggca ataaccagct ctggtgatac ataaaactac tcaactgt	177

<210> 163

<211> 137

<212> DNA

<213> Homo sapien

<220>

<221> misc\_feature  
 <222> (1)...(137)  
 <223> n = A,T,C or G

<400> 163  
 catttatataca gacaggcgtg aagacattca cgacaaaaac gcgaaattct atcccgtgac 60  
 canagaaggc agctacggct actcctacat cctggcgtgg gtggccttcg cctgcacctt 120  
 catcagcggc atgatgt 137

<210> 164  
 <211> 469  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(469)  
 <223> n = A,T,C or G

<400> 164  
 cttatcacaa tgaatgttct cctgggcagc gttgtgatct ttgccacctt cgtgacttta 60  
 tgcaatgcat catgctatatt catacctaata gagggagttc caggagattc aaccaggaaa 120  
 tgcattggatc tcaaaggaaa caaacaccca ataaactcgg agtggcagac tgacaactgt 180  
 gagacatgca cttgctacga aacagaaatt tcatgttgca cccttgtttc tacacctgtg 240  
 ggttatgaca aagacaactg ccaaagaatc ttcaagaagg aggactgcaa gtatatcgtg 300  
 gtggagaaga aggacccaaa aaagacctgt tctgtcagtg aatggataat ctaatgtgct 360  
 tctagtaggc acagggctcc caggccaggc ctcatctctc tctggcctct aatagtcaat 420  
 gattgtgtag ccatgcctat cagtaaaaag atntttgagc aaacacttt 469

<210> 165  
 <211> 195  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(195)  
 <223> n = A,T,C or G

<400> 165  
 acagtttttt atanatatcg acattgccgg cacttgtggt cagtttcata aagctgggtg 60  
 atccgctgtc atccactatt ccttggctag agtaaaaatt attcttatag cccatgtccc 120  
 tgcaggccgc ccgcccgtag ttctcgttcc agtcgtcttg gcacacaggg tgccaggact 180  
 tcctctgaga tgagt 195

<210> 166  
 <211> 383  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(383)  
 <223> n = A,T,C or G

<400> 166  
 acatcttagt agtgtggcac atcagggggc catcagggtc acagtcactc atagcctcgc 60  
 cgaggctcga gtccacacca ccggtgtagg tgtgctcaat cttgggcttg gcgcccacct 120  
 ttggagaagg gatattgctgc acacacatgt ccacaaagcc tgtgaactcg ccaaagaatt 180  
 ttgcagacc agcctgagca agggcggtat gttcagcttc agtcctctct tcgtcagggtg 240  
 gatgccaacc tcgtctangg tccgtgggaa gctggtgtcc acntcaccta caacctgggc 300  
 gangatctta taaagaggct ccnagataaa ctccacgaaa cttctctggg agctgctagt 360

nggggccttt ttggtgaact ttc

383

<210> 167

<211> 247

<212> DNA

<213> Homo sapien

<220>

<221> misc\_feature

<222> (1)...(247)

<223> n = A,T,C or G

<400> 167

acagagccag	accttggcca	taaatgaanc	agagattaag	actaaacccc	aagtcganat	60
tggagcagaa	actggagcaa	gaagtgggcc	tggggctgaa	gtagagacca	aggccactgc	120
tatanccata	cacagagcca	actctcaggc	caaggcnatg	gttggggcag	anccagagac	180
tcaatctgan	tcctaaagtgg	tggctggaac	actggtcatg	acanaggcag	tgactctgac	240
tgangtc						247

<210> 168

<211> 273

<212> DNA

<213> Homo sapien

<220>

<221> misc\_feature

<222> (1)...(273)

<223> n = A,T,C or G

<400> 168

acttctaagt	tttctagaag	tggaaggatt	gtantcatcc	tgaaaatggg	tttacttcaa	60
aatccctcan	ccttggttctt	cacnactgtc	tatactgana	gtgtcatgtt	tccacaaagg	120
gctgacacct	gagcctgnat	tttcactcat	ccctgagaag	ccctttccag	taggggtgggc	180
aattcccaac	ttccttgcca	caagcttccc	aggctttctc	ccctggaaaa	ctccagcttg	240
agtcccgat	acactcatgg	gctgcctgg	gca			273

<210> 169

<211> 431

<212> DNA

<213> Homo sapien

<220>

<221> misc\_feature

<222> (1)...(431)

<223> n = A,T,C or G

<400> 169

acagccttgg	cttccccaaa	ctccacagtc	tcagtgcaga	aagatcatct	tccagcagtc	60
agctcagacc	aggggtcaaag	gatgtgacat	caacagtttc	tggtttcaga	acagggtcta	120
ctactgtcaa	atgaccccc	atacttctc	aaaggctgtg	gtaagttttg	cacagggtgag	180
ggcagcagaa	aggggggtant	tactgatgga	caccatcttc	tctgtatact	ccacactgac	240
cttgccatgg	gcaaaggccc	ctaccacaaa	aacaatagga	tcaactgctgg	gcaccagctc	300
acgcacatca	ctgacaaccg	ggatggaaaa	agaantgcc	actttcatac	atccaactgg	360
aaagtgatct	gatactggat	tcttaattac	cttcaaaagc	ttctgggggc	catcagctgc	420
tcgaacactg	a					431

<210> 170

<211> 266

<212> DNA

<213> Homo sapien

<220>



<221> misc\_feature  
 <222> (1)...(266)  
 <223> n = A,T,C or G

<400> 170  
 acctgtgggc tgggctgtta tgccctgtgcc ggctgctgaa agggagttca gaggtggagc 60  
 tcaaggagct ctgcaggcat ttgccaanc ctctccanag canagggagc aacctacact 120  
 ccccgctaga aagacaccag attggagtcc tgggagggg agttggggtg ggcatttgat 180  
 gtatacttgt cacctgaatg aangagccag agaggaanga gacgaanatg anattggcct 240  
 tcaaagctag gggctctggca ggtgga 266

<210> 171  
 <211> 1248  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(1248)  
 <223> n = A,T,C or G

<400> 171  
 ggcagccaaa tcataaacgg cgaggactgc agcccgcact cgcagccctg gcaggcggca 60  
 ctggtcatgg aaaacgaatt gttctgctcg ggcgtcctgg tgcattccga gtgggtgctg 120  
 tcagccgcac actgtttcca gaagtgaagt cagagctcct acaccatcgg gctgggcctg 180  
 cacagtcttg aggccgacca agagccaggg agccagatgg tggaggccag cctctccgta 240  
 cggcaccag agtacaacag acccttgctc gctaacgacc tcatgtctcat caagttggac 300  
 gaatccgtgt ccgagtctga caccatccgg agcatcagca ttgcttcgca gtgccctacc 360  
 gcggggaact cttgcctcgt ttctggctgg ggtctgctgg cgaacggcag aatgcctacc 420  
 gtgctgcagt gcgtgaacgt gtcgggtggtg tctgaggagg tctgcagtaa gctctatgac 480  
 ccgctgtacc accccagcat gttctgcgcc ggcggagggc aagaccagaa ggactcctgc 540  
 aacggtgact ctggggggcc cctgatctgc aacgggtact tgcagggcct tgtgtctttc 600  
 ggaaaagccc cgtgtggcca agttggcgtg ccagggtgtc acaccaacct ctgcaaattc 660  
 actgagtggga tagagaaaac cgtccaggcc agttaactct ggggactggg aacccatgaa 720  
 attgaccccc aaatacatcc tgcggaagga attcaggaat atctgttccc agccccctcct 780  
 ccctcaggcc caggagtcca ggccccagc ccctcctccc tcaaaccaag ggtacagatc 840  
 ccagccctcct cctccctcag acccaggagt ccagaccccc cagccctcct tccctcagac 900  
 ccaggagtcc agccccctcct ccctcagacc caggagtcca gacccccccag cccctcctcc 960  
 ctccagacca ggggtccagg cccccaaccc ctccctccctc agactcagag gtccaagccc 1020  
 ccaaccntc attccccaga cccagaggtc cagggtccag cccctcntcc ctccagacca 1080  
 gcggtccaat gccacctaga cntccctgt acacagtgcc cccttggtgc acgttgaccc 1140  
 aaccttacca gttggtttt catttttngt ccctttcccc tagatccaga aataaagttt 1200  
 aagagaagng caaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1248

<210> 172  
 <211> 159  
 <212> PRT  
 <213> Homo sapien

<220>  
 <221> VARIANT  
 <222> (1)...(159)  
 <223> Xaa = Any Amino Acid

<400> 172  
 Met Val Glu Ala Ser Leu Ser Val Arg His Pro Glu Tyr Asn Arg Pro  
 1 5 10 15  
 Leu Leu Ala Asn Asp Leu Met Leu Ile Lys Leu Asp Glu Ser Val Ser  
 20 25 30  
 Glu Ser Asp Thr Ile Arg S r Ile Ser Ile Ala Ser Gln Cys Pro Thr  
 35 40 45  
 Ala Gly Asn Ser Cys Leu Val Ser Gly Trp Gly Leu Leu Ala Asn Gly

50 Arg Met Pro Thr Val Leu 55 Gln Cys Val Asn Val 60 Ser Val Val Ser Glu  
 65 Glu Val Cys Ser Lys 70 Leu Tyr Asp Pro Leu 75 Tyr His Pro Ser Met Phe  
 Cys Ala Gly Gly 85 Gln Xaa Gln Xaa 90 Asp Ser Cys Asn Gly Asp Ser  
 Gly Gly Pro Leu Ile Cys Asn Gly 105 Tyr Leu Gln Gly Leu Val Ser Phe  
 Gly Lys Ala Pro Cys Gly Gln Val Gly Val Pro Gly 125 Tyr Thr Asn  
 130 Leu Cys Lys Phe Thr Glu Trp Ile Glu Lys Thr 140 Val Gln Ala Ser  
 145 150 155

<210> 173  
 <211> 1265  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(1265)  
 <223> n = A,T,C or G

<400> 173

ggcagcccg	actgcgagcc	ctggcaggcg	gcaactgggtca	tggaaaacga	attgtttctgc	60
tcgggcgctcc	tggtgcatcc	gcagtggtg	ctgtcagccg	cacactgttt	ccagaactcc	120
tacaccatcg	ggctgggct	gcacagtctt	gaggccgacc	aagagccagg	gagccagatg	180
gtggaggcca	gcctctccgt	acggcaccca	gagtacaaca	gacccttgct	cgctaacgac	240
ctcatgctca	tcaagttgga	cgaatccgtg	tccgagtctg	acaccatccg	gagcatcagc	300
attgcttcgc	agtgccttac	cgcggggaac	tcttgccctg	tttctggctg	gggtctgctg	360
gcgaacgggtg	agctcacggg	tgtgtgtctg	ccctcttcaa	ggaggtcctc	tgcccagtcg	420
cgggggctga	cccagagctc	tgcgtccag	gcagaatgcc	taccgtgctg	cagtgcgtga	480
acgtgtcggt	gggtgtctgag	gaggtctgca	gtaagctcta	tgaccgctg	taccacccca	540
gcatgttctg	cgccggcgga	gggcaagacc	agaaggactc	ctgcaacggg	gactctgggg	600
ggccccctgat	ctgcaacggg	tacttgacgg	gccttgtgtc	tttcggaaaa	gccccgtgtg	660
gccaagtttg	cgtgccaggt	gtctacacca	acctctgcaa	attcactgag	tggatagaga	720
aaaccgtcca	ggccagttta	ctctggggac	tgggaaccca	tgaaattgac	ccccaaatac	780
atcctgcgga	aggaattcag	gaatatctgt	tcccagcccc	tcctccctca	ggcccaggag	840
tccaggcccc	cagccctcc	tcctcaaac	caagggtaca	gatccccagc	ccctcctccc	900
tcagaccag	gagtccagac	ccccagccc	ctcctccctc	agaccagga	gtccagcccc	960
tcctcctca	gaccagggag	tccagacccc	ccagccctc	ctccctcaga	cccaggggtt	1020
gaggccccca	accctcctc	cttcagagtc	agaggtccaa	gcccccaacc	cctcgttccc	1080
cagaccagga	ggttnnaggc	ccagccctc	ttccntcaga	cccagnggtc	caatgccacc	1140
tagattttcc	ctgnacacag	tgcccccttg	tggnangttg	acccaacctt	accagttggt	1200
ttttcatatt	tngtcccttt	cccctagatc	cagaaataaa	gtttaagaga	ngngcaaaaa	1260
aaaaa						1265

<210> 174  
 <211> 1459  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(1459)  
 <223> n = A,T,C or G

<400> 174

ggtcagccgc	acactgtttc	cagaagtgag	tgcagagctc	ctacaccatc	gggctggggc	60
tgcacagtct	tgaggccgac	caagagccag	ggagccagat	ggtggaggcc	agcctctccg	120
taaggcaccc	agagtacaac	agacccttgc	tcgctaacga	cctcatgctc	atcaagttgg	180

acgaatccgt	gtccgagtct	gacaccatcc	ggagcatcag	cattgcttcg	cagtgcctta	240
ccgcggggaa	ctcttgcttc	gtttctggct	ggggtctgct	ggcgaacggg	gagctcacgg	300
gtgtgtgtct	gccctcttca	aggaggtcct	ctgcccagtc	gcgggggctg	accagagct	360
ctgcgtccca	ggcagaatgc	ctaccgtgct	gcagtgcgtg	aacgtgtcgg	tgggtgtctga	420
ngaggtctgc	antaagctct	atgacccgct	gtaccacccc	ancatgttct	gcgccggcgg	480
agggcaagac	cagaaggact	cctgcaacgt	gagagagggg	aaaggggagg	gcaggcgact	540
cagggaaagg	tggagaaggg	ggagacagag	acacacaggg	ccgcatggcg	agatgcagag	600
atggagagac	acacagggag	acagtgacaa	ctagagagag	aaactgagag	aaacagagaa	660
ataaacacag	gaataaagag	aagcaaagga	agagagaaac	agaaacagac	atggggaggc	720
agaaacacac	acacatagaa	atgcagttga	ccttccaaca	gcatggggcc	tgaggcggt	780
gacctccacc	caatagaaaa	tectcttata	acttttgact	ccccaaaaac	ctgactagaa	840
atagcctact	gttgacgggg	agccttacca	ataacataaa	tagtcgattt	atgcatacgt	900
tttatgcatt	catgatatac	ctttgttga	attttttgat	atttctaagc	tacacagttc	960
gtctgtgaat	ttttttaaat	tgttgcaact	ctcctaaaaat	ttttctgatg	tgtttattga	1020
aaaaatccaa	gtataagtgg	acttgtgcat	tcaaaccagg	gttggttcaag	ggtcaactgt	1080
gtaccagag	ggaaacagtg	acacagattc	atagaggtga	aacacgaaga	gaaacaggaa	1140
aatcaagac	tctacaaaga	ggctgggcag	ggtggctcat	gcctgtaatc	ccagcacttt	1200
gggagggcag	gcaggcagat	cacttgaggt	aaggagttca	agaccagcct	ggccaaaatg	1260
gtgaaatcct	gtctgtacta	aaaatacaaa	agttagctgg	atatggtggc	aggcgctgt	1320
aatcccagct	acttgggagg	ctgaggcagg	agaattgctt	gaatatggga	ggcagaggtt	1380
gaagtgagtt	gagatcacac	cactatactc	cagctggggc	aacagagtaa	gactctgtct	1440
caaaaaaaaa	aaaaaaaaa					1459

<210> 175  
 <211> 1167  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(1167)  
 <223> n = A, T, C or G

<400> 175						
gcgcagccct	ggcaggcggc	actggctcatg	gaaaacgaat	tgttctgctc	gggcgtcctg	60
gtgcattccg	agtgggtgct	gtcagcccgca	cactgtttcc	agaactccta	caccatcggg	120
ctgggcctgc	acagtcttga	ggccgaccaa	gagccaggga	gccagatggg	ggaggccagc	180
ctctccgtac	ggcaccacaga	gtacaacaga	ctcttgctcg	ctaacgacct	catgtctatc	240
aagttggacg	aatccgtgtc	cgagtctgac	accatccgga	gcatcagcat	tgcttcgcag	300
tgccctaccg	cggggaactc	ttgcctcgtn	tctggctggg	gtctgctggc	gaacggcaga	360
atgcctaccg	tgctgcactg	cgtgaacgtg	tcgggtgggt	ctgaggangt	ctgcagtaag	420
ctctatgacc	cgctgtacca	ccccagcatg	ttctgcgccg	gcggagggca	agaccagaag	480
gactcctgca	acggtgactc	tggggggccc	ctgatctgca	acgggtactt	gcagggcctt	540
gtgtctttcg	gaaaagcccc	gtgtggccaa	cttggcgtgc	caggtgtcta	caccaacctc	600
tgcaaattca	ctgagtggat	agagaaaacc	gtccagncca	gttaactctg	gggactggga	660
acccatgaaa	ttgaccccca	aatacatcct	gcggaangaa	ttcaggaata	tctgttccca	720
gcccctcttc	cctcaggccc	aggagtccag	gccccagccc	cctcctccct	caaaccaagg	780
gtacagatcc	ccagcccctc	ctccctcaga	cccaggagtc	cagaccccc	agccccctnt	840
ccntcagacc	caggagtcca	gcccctcttc	cntcagacgc	aggagtccag	acccccagc	900
ccntcntccg	tcagaccag	gggtgcaggc	ccccaacccc	tcntccntca	gagtcagagg	960
tccaagcccc	caacccctcg	ttcccagac	ccagaggtnc	aggtcccagc	ccctcctccc	1020
tcagaccag	cgggtccaatg	ccacctagan	tntccctgta	cacagtgcc	ccttgtggca	1080
ngttgacca	acettaccag	ttggtttttc	attttttgtc	cctttcccct	agatccagaa	1140
ataaagtnta	agagaagcgc	aaaaaaa				1167

<210> 176  
 <211> 205  
 <212> PRT  
 <213> Homo sapien

<220>  
 <221> VARIANT

&lt;222&gt; (1)...(205)

&lt;223&gt; Xaa = Any Amino Acid

&lt;400&gt; 176

Met Glu Asn Glu Leu Phe Cys Ser Gly Val Leu Val His Pro Gln Trp  
 1 5 10 15  
 Val Leu Ser Ala Ala His Cys Phe Gln Asn Ser Tyr Thr Ile Gly Leu  
 20 25 30  
 Gly Leu His Ser Leu Glu Ala Asp Gln Glu Pro Gly Ser Gln Met Val  
 35 40 45  
 Glu Ala Ser Leu Ser Val Arg His Pro Glu Tyr Asn Arg Leu Leu Leu  
 50 55 60  
 Ala Asn Asp Leu Met Leu Ile Lys Leu Asp Glu Ser Val Ser Glu Ser  
 65 70 75 80  
 Asp Thr Ile Arg Ser Ile Ser Ile Ala Ser Gln Cys Pro Thr Ala Gly  
 85 90 95  
 Asn Ser Cys Leu Val Ser Gly Trp Gly Leu Leu Ala Asn Gly Arg Met  
 100 105 110  
 Pro Thr Val Leu His Cys Val Asn Val Ser Val Val Ser Glu Xaa Val  
 115 120 125  
 Cys Ser Lys Leu Tyr Asp Pro Leu Tyr His Pro Ser Met Phe Cys Ala  
 130 135 140  
 Gly Gly Gly Gln Asp Gln Lys Asp Ser Cys Asn Gly Asp Ser Gly Gly  
 145 150 155 160  
 Pro Leu Ile Cys Asn Gly Tyr Leu Gln Gly Leu Val Ser Phe Gly Lys  
 165 170 175  
 Ala Pro Cys Gly Gln Leu Gly Val Pro Gly Val Tyr Thr Asn Leu Cys  
 180 185 190  
 Lys Phe Thr Glu Trp Ile Glu Lys Thr Val Gln Xaa Ser  
 195 200 205

&lt;210&gt; 177

&lt;211&gt; 1119

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 177

gagcactcgc agccctggca ggcggcactg gtcattggaaa acgaattggt ctgctcgggc 60  
 gtcctgggtgc atccgcagtg ggtgctgtca gccgcacact gttccagaa ctcctacacc 120  
 atcgggctgg gcctgcacag tcttgaggcc gaccaagagc cagggagcca gatgggtggag 180  
 gccagcctct ccgtacggca cccagagtac aacagaccct tgctcgctaa cgacctcatg 240  
 ctcattcaagt tggacgaatc cgtgtccgag tctgacacca tccggagcat cagcattgct 300  
 tcgcagtgcc ctaccgcggg gaactcttgc ctctgttctg gctggggtct gctggcgaac 360  
 gatgctgtga ttgccatcca gtcccagact gtgggaggct gggagtgtga gaagctttcc 420  
 caaccctggc aggggtgtac catttcggca acttccagtg caaggacgtc ctgctgcatc 480  
 ctactgggt gtcactact gtcactgca tcaccgcgaa cactgtgatc aactagccag 540  
 caccatagtt ctccgaagtc agactatcat gattactgtg ttgactgtgc tgtctattgt 600  
 actaaccatg ccgatgttta ggtgaaatta gcgtcacttg gcctcaacca tcttggtatc 660  
 cagttatcct cactgaattg agatttcctg cttcagtgtc agccattccc acataatttc 720  
 tgacctacag aggtgaggga tcatatagct cttcaaggat gctgggtactc ccctcacaac 780  
 ttcatttctc ctgttgtagt gaaagggtgcg ccctctggag cctcccaggg tgggtgtgca 840  
 ggtcacaatg atgaatgtat gatcgtgttc ccattaccca aagcctttaa atccctcatg 900  
 ctacgtacac cagggcaggt ctacgatttc ttcatttagt gtatgctgtc cattcatgca 960  
 accacctcag gactcctgga ttctctgcct agttgagctc ctgcatgctg cctccttggg 1020  
 gaggtgaggg agagggccca tgggtcaatg ggatctgtgc agttgtaaca cattaggtgc 1080  
 ttaataaaca gaagctgtga tgttaaaaaa aaaaaaaaaa 1119

&lt;210&gt; 178

&lt;211&gt; 164

&lt;212&gt; PRT

&lt;213&gt; Homo sapien

<220>  
 <221> VARIANT  
 <222> (1)...(164)  
 <223> Xaa = Any Amino Acid

<400> 178  
 Met Glu Asn Glu Leu Phe Cys Ser Gly Val Leu Val His Pro Gln Trp  
 1 5 10 15  
 Val Leu Ser Ala Ala His Cys Phe Gln Asn Ser Tyr Thr Ile Gly Leu  
 20 25 30  
 Gly Leu His Ser Leu Glu Ala Asp Gln Glu Pro Gly Ser Gln Met Val  
 35 40 45  
 Glu Ala Ser Leu Ser Val Arg His Pro Glu Tyr Asn Arg Pro Leu Leu  
 50 55 60  
 Ala Asn Asp Leu Met Leu Ile Lys Leu Asp Glu Ser Val Ser Glu Ser  
 65 70 75 80  
 Asp Thr Ile Arg Ser Ile Ser Ile Ala Ser Gln Cys Pro Thr Ala Gly  
 85 90 95  
 Asn Ser Cys Leu Val Ser Gly Trp Gly Leu Leu Ala Asn Asp Ala Val  
 100 105 110  
 Ile Ala Ile Gln Ser Xaa Thr Val Gly Gly Trp Glu Cys Glu Lys Leu  
 115 120 125  
 Ser Gln Pro Trp Gln Gly Cys Thr Ile Ser Ala Thr Ser Ser Ala Arg  
 130 135 140  
 Thr Ser Cys Cys Ile Leu Thr Gly Cys Ser Leu Leu Thr Ala Ser  
 145 150 155 160  
 Pro Gly Thr Leu

<210> 179  
 <211> 250  
 <212> DNA  
 <213> Homo sapien

<400> 179  
 ctggagtgcc ttggtgtttc aagcccctgc aggaagcaga atgcaccttc tgaggcacct 60  
 ccagctgccc ccggccgggg gatgcgaggc tcggagcacc cttgcccggc tgtgattgct 120  
 gccaggcact gttcatctca gcttttctgt ccctttgctc ccggcaagcg cttctgctga 180  
 aagttcatat ctggagcctg atgtcttaac gaataaaggt cccatgctcc acccgaaaaa 240  
 aaaaaaaaaa 250

<210> 180  
 <211> 202  
 <212> DNA  
 <213> Homo sapien

<400> 180  
 actagtccag tgtggtggaa ttccattgtg ttgggcccac cacaatggct acctttaaca 60  
 tcacccagac ccgcccctg ccggtgcccc acgctgctgc taacgacagt atgatgctta 120  
 ctctgctact cggaactat ttttatgtaa ttaatgtatg ctttctgtgt tataaatgcc 180  
 tgatttaaaa aaaaaaaaaa aa 202

<210> 181  
 <211> 558  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(558)  
 <223> n = A,T,C or G

<400> 181  
 tccytttgkt naggtttkkg agacamccck agacctwaan ctgtgtcaca gacttcyngg 60  
 aatgttttagg cagtgctagt aatttcytcg taatgattct gttattactt tcctnattct 120  
 ttattcctct ttcttctgaa gattaatgaa gttgaaaatt gaggtggata aatacaaaaa 180  
 ggtagtgtga tagtataagt atctaagtgC agatgaaagt gtgttatata tatccattca 240  
 aaattatgca agtttagtaat tactcagggg taactaaatt actttaatat gctgttgaac 300  
 ctactctgtt ccttggctag aaaaaattat aaacaggact ttgttagttt gggaagccaa 360  
 attgataata ttctatgttc taaaagttgg gctatacata aattattaag aaatatggaw 420  
 ttttattccc aggaatatgg kgttcatttt atgaatatta cscrggatag awgtwtgagt 480  
 aaaaycagtt ttggtwaata ygtwaatatg tcmtaaataa acaakgcttt gacttatttc 540  
 caaaaaaaaa aaaaaaaa 558

<210> 182  
 <211> 479  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(479)  
 <223> n = A,T,C or G

<400> 182  
 acagggwttk grggtgcta agseccerga rwtggtttga tccaaccctg gcttwttttc 60  
 agaggggaaa atggggccta gaagttacag mscatytagy tgggtgcgmg gcacccctgg 120  
 cstcacacag astcccgagt agctgggact acaggcacac agtcactgaa gcaggccctg 180  
 ttwgcaattc acgttgccac ctccaactta aacattcttc atatgtgatg tccttagtca 240  
 ctaagggttaa actttccac ccagaaaagg caacttagat aaaatcttag agtactttca 300  
 tactmttcta agtcctcttc cagcctcact kkgagtcctm cytggggggt gataggaant 360  
 ntctcttggc tttctcaata aartctctat ycatctcatg ttttaatttg tacgcataa 420  
 awtgstgata aaattaaaat gttctggtty mactttaaaa aaaaaaaaaa aaaaaaaaaa 479

<210> 183  
 <211> 384  
 <212> DNA  
 <213> Homo sapien

<400> 183  
 aggcgggagc agaagctaaa gccaaagccc aagaagagtg gcagtgccag cactggtgcc 60  
 agtaccagta ccaataacag tgccagtgcc agtgccagca ccagtgggtg cttcagtgtc 120  
 ggtgccagcc tgaccgccac tctcacattt gggtctctcg ctggccttgg tggcctggt 180  
 gccagcacca gtggcagctc tgggtgcctgt ggtttctctc acaagtgaga ttttagatat 240  
 tgtaaatcct gccagtcttt ctcttcaagc cagggtgcat cctcagaaac ctactcaaca 300  
 cagcactcta ggcagccact atcaatcaat tgaagttgac actctgcatt aratctattt 360  
 gccatttcaa aaaaaaaaaa aaaa 384

<210> 184  
 <211> 496  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(496)  
 <223> n = A,T,C or G

<400> 184  
 accgaattgg gaccgctggc ttataagcga tcatgtyynt ccrgtatcac ctcaacgagc 60  
 agggagatcg agtctatacg ctgaagaaat ttgaccgat gggacaacag acctgctcag 120  
 cccatcctgc tcggttctcc ccagatgaca aatactctsg acaccgaatc accatcaaga 180  
 aacgcttcaa ggtgctcatg acccagcaac cgcgccctgt cctctgaggg tcccttaaac 240  
 tgatgtcttt tctgccacct gttaccctc ggagactcgg taaccaaact cttcggactg 300

tgagccctga	tgcctttttg	ccagccatac	tctttggcat	ccagtctctc	gtggcgattg	360
attatgcttg	tgtgaggcaa	tcatgggtgg	atcacccata	aagggaacac	atttgacttt	420
tttttctcat	attttaaatt	actacmagaw	tattwmagaw	waaatgawtt	gaaaaactst	480
taaaaaaaaa	aaaaaa					496

<210> 185  
 <211> 384  
 <212> DNA  
 <213> Homo sapien

<400> 185						
gctggtagcc	tatggcgkgg	cccacggagg	ggctcctgag	gccacggrac	agtgacttcc	60
caagtatcyt	gcgcsgcgtc	ttctaccgtc	cctacctgca	gatcttcggg	cagattcccc	120
aggaggacat	ggacgtggcc	ctcatggagc	acagcaactg	ytcgtcggag	cccggcttct	180
gggcacaccc	tcttggggcc	caggcgggca	cctgcgtctc	ccagtatgcc	aactggctgg	240
tgggtgctgct	cctcgtcac	ttcctgctcg	tggccaacat	cctgctggtc	aacttgctca	300
ttgccatgtt	cagttacaca	ttcggcaaag	tacagggcaa	cagcgatctc	tactgggaag	360
gcgcagcgtt	accgcctcat	ccgg				384

<210> 186  
 <211> 577  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(577)  
 <223> n = A,T,C or G

<400> 186						
gagttagctc	ctccacaacc	ttgatgaggt	cgtctgcagt	ggcctctcgc	ttcataccgc	60
tnccatcgte	atactgtagg	tttgccacca	cytcctggca	tcttggggcg	gcntaatatt	120
ccaggaaact	ctcaatcaag	tcaccgtcga	tgaaacctgt	gggctgggtc	tgtcttcgcg	180
tcgggtgtgaa	aggatctccc	agaaggagtg	ctcgatcttc	cccacacttt	tgatgacttt	240
attgagtcga	ttctgcatgt	ccagcaggag	gttgtaccag	ctctctgaca	gtgaggtcac	300
cagccctatc	atgccgttga	mcgtgccgaa	garcaccgag	ccttggtgtg	gggkkgaagt	360
ctcaccacga	ttctgcatta	ccagagagcc	gtggcaaaaag	acattgacaa	actcgcccag	420
gtggaaaaag	amcamctcct	ggargtgctn	gccgctcctc	gtcmgttggt	ggcagcgctw	480
tccttttgac	acacaaacaa	gttaaaggca	ttttcagccc	ccagaaantt	gtcatcatcc	540
aagatntcgc	acagcactna	tccagttggg	attaaat			577

<210> 187  
 <211> 534  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(534)  
 <223> n = A,T,C or G

<400> 187						
aacatcttcc	tgtataatgc	tgtgtaatat	cgatccgatn	ttgtctgstg	agaatycatw	60
actkggaaaa	gmaacattaa	agcctggaca	ctgggtattaa	aattcacaat	atgcaacact	120
ttaaacagtg	tgtcaatctg	ctcccyynac	tttgtcatca	ccagtctggg	aakaagggtta	180
tgccctattc	acacctgtta	aaagggcgct	aagcattttt	gattcaacat	cttttttttt	240
gacacaagtc	cgaaaaaagc	aaaagtaaac	agttatyaat	ttgttagcca	attcactttc	300
ttcatgggac	agagccatyt	gatttaaaaa	gcaaatgca	taatattgag	cttygggagc	360
tgatatttga	gcggaagagt	agcctttcta	cttcaccaga	cacaactccc	tttcatattg	420
ggatgttnac	naaagtwatg	tctctwacag	atgggatgct	tttgtggcaa	ttctgttctg	480
aggatctccc	agtttattta	ccacttgcac	aagaaggcgt	tttcttcctc	aggc	534

<210> 188  
<211> 761  
<212> DNA  
<213> Homo sapien

<220>  
<221> misc\_feature  
<222> (1)...(761)  
<223> n = A,T,C or G

<400> 188  
agaaaccagt atctctnaaa acaacctctc ataccttggtg gacctaatTT tgtgtgogtg 60  
tgtgtgtgcg cgcataattat atagacaggc acatcttttt tacttttgta aaagcttatg 120  
cctctttggt atctatatct gtgaaagttt taatgatctg ccataatgtc ttggggacct 180  
ttgtcttctg tgtaaatggt actagagaaa acacctatnt tatgagtcaa tctagttngt 240  
tttattcgac atgaaggaaa ttccagatn acaacactna caaactctcc ctkgackarg 300  
ggggacaaag aaaagcaaaa ctgamcataa raaacaatwa cctgggtgaga arttgcataa 360  
acagaaatwr ggtagtatat tgaarnacag catcattaaa rmgtttwktt wttctccctt 420  
gcaaaaaaca tgtacngact tcccgttgag taatgccaag ttgttttttt tatnataaaa 480  
cttgcccttc attacatggt tnaaagtggg gtgggtgggccc aaaatattga aatgatggaa 540  
ctgactgata aagctgtaca aataagcagt gtgcctaaca agcaacacag taatgttgac 600  
atgcttaatt cacaaatgct aatttcatta taaatgtttg ctaaaataca ctttgaacta 660  
ttttctgtn ttccagagc tgagatntta gattttatgt agtatnaagt gaaaaantac 720  
gaaaataata acattgaaga aaaaananaaa aanaaaaaaa a 761

<210> 189  
<211> 482  
<212> DNA  
<213> Homo sapien

<220>  
<221> misc\_feature  
<222> (1)...(482)  
<223> n = A,T,C or G

<400> 189  
tttttttttt ttgtccgatn ctactatttt attgcaggan gtgggggtgt atgcaccgca 60  
caccggggct atnagaagca agaaggaagg agggagggca cagccccttg ctgagcaaca 120  
aagccgcctg ctgccttctc tgtctgtctc ctgggtgcagg cacatgggga gaccttcccc 180  
aaggcagggg ccaccagtcc aggggtggga atacaggggg tgggangtgt gcataagaag 240  
tgataggcac aggccacccg gtacagaccc ctcggctcct gacaggtnga tttcgaccag 300  
gtcattgtgc cctgcccagg cacagcgtn atctggaaaa gacagaatgc tttccttttc 360  
aaatttggct ngtcantgaa ngggcanttt tccaanttng gctnggtctt ggtacncttg 420  
gttcggccca gctccnctc caaaaantat tcacccnct ccnaattgct tgcnggnccc 480  
cc 482

<210> 190  
<211> 471  
<212> DNA  
<213> Homo sapien

<220>  
<221> misc\_feature  
<222> (1)...(471)  
<223> n = A,T,C or G

<400> 190  
tttttttttt ttttaaaaca gtttttcaca acaaaattta ttagaagaat agtggttttg 60  
aaaactctcg catccagtga gaactaccat acaccacatt acagctngga atgtnctcca 120  
aatgtctggt caaatgatac aatggaacca ttcaatctta cacatgcacg aaagaacaag 180  
cgcttttgac atacaatgca caaaaaaaa aggggggggg gaccacatgg attaaaattt 240  
taagtactca tcacatacat taagacacag ttctagtcca gtcnaaaatc agaactgcnt 300



tgaaaaattt	catgtatgca	atccaaccaa	agaacttnat	tggtgatcat	gantncteta	360
ctacatcnac	cttgatcatt	gccaggaacn	aaaagttnaa	ancacncngt	acaaaaanaa	420
tctgtaattn	anttcaacct	ccgtacngaa	aaatnttnt	tatacactcc	c	471

<210> 191  
 <211> 402  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(402)  
 <223> n = A,T,C or G

<400> 191	
gagggattga	agggtctgttc
gtcttccact	cactgtctgt
attcttcacc	agtcacatct
cttcctttgt	taagacttca
ctcgttctct	aacaatgtcc
ctttgtgcat	ccattttaaa
aagagtcac	tgtctgcaaa
aggtgcgta	gtatatctgc
ca	
60	120
180	240
300	360
402	

<210> 192  
 <211> 601  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(601)  
 <223> n = A,T,C or G

<400> 192	
gagctcggat	ccaataatct
ggtctacccc	acatgggagc
atgcytyttt	gaytaccggtg
cttttgtgga	aaaactggca
acgagacact	tgaaagggtgt
cagttgtcaa	tactaaccgg
tacatctcct	gacagtactg
tgttggatca	ggttcccat
aaaacattgc	gatttgaggc
cctcgatgta	gccggccagc
g	
60	120
180	240
300	360
420	480
540	600
601	

<210> 193  
 <211> 608  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(608)  
 <223> n = A,T,C or G

<400> 193	
atacagccca	natcccacca
ggtcccgtg	tagccccagc
cccaacgcag	tcagmagcgg
tkaagtgcag	gaagaggctg
ctgcagcgaa	actcctcgat
cgaagatgcg	cttggtgact
ctgctggaag	cggttgatgc
gscgggtcaa	tgaactccay
gggtccaccag	gatgcccag
gggaagcgaa	tgaggcccag
tgaggcccag	ggccttgccc
60	120
180	240
300	

agaaccttcc gctgtttctc tggcgtcacc tgcagctgct gccgctgaca ctcggcctcg	360
gaccagcgga caaacggcrt tgaacagccg cacctcacgg atgcccagtg tgtcgcgctc	420
caggammgsc accagcggtg ccagggtcaat gtcgggtgaag ccctccgcgg gtrattggcgt	480
ctgcagtggt tttgtcgatg ttctccaggg acagggtggc cagctgcggt tcatcgaaga	540
gtcgcgcctg cgtgagcagc atgaaggcgt tgtcggctcg cagttcttct tcaggaactc	600
cacgcaat	608

&lt;210&gt; 194

&lt;211&gt; 392

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(392)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 194

gaacggctgg accttgccctc gcatttgtgt tgctggcagg gaataccttg gcaagcagyt	60
ccagtcggag cagccccaga ccgctgccgc ccgaagctaa gcctgcctct ggccttcccc	120
tcgcctcaa tgcagaacca gtagtgggag cactgtgttt agagttaaga gtgaacactg	180
tttgatttta cttgggaatt tcctctgtta tatagctttt cccaatgcta atttccaaac	240
aacaacaaca aaataacatg tttgcctgtt aagttgtata aaagtaggtg attctgtatt	300
taaagaaaat attactgtta catatactgc ttgcaatttc tgtatttatt gktnctstgg	360
aaataaatat agttattaaa ggttgtcant cc	392

&lt;210&gt; 195

&lt;211&gt; 502

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(502)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 195

ccsttkgagg ggtkaggkyc cagttyccga gtggaagaaa caggccagga gaagtgcgtg	60
ccgagctgag gcagatgttc ccacagtgc cccagagcc stgggstata gtytctgacc	120
cctcncaagg aaagaccacs ttctggggac atgggctgga gggcaggacc tagaggcacc	180
aagggaaggc cccattccgg ggstgttccc cgaggaggaa ggggaagggc tctgtgtgcc	240
ccccasgagg aagaggccct gagtccctgg atcagacacc ccttcacgtg tatccccaca	300
caaatgcaag ctcaccaagg tcccctctca gtccccttcc stacaccctg amcgccact	360
gscscacacc caccagagc acgccaccgc ccatggggar tgtgctcaag gartcgngg	420
gcarcgtgga catctngtcc cagaaggggg cagaatctcc aatagangga ctgarcmstt	480
gctnanaaaa aaaaanaaaa aa	502

&lt;210&gt; 196

&lt;211&gt; 665

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(665)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 196

ggttacttgg ttctattgcc accacttagt ggatgtcatt tagaaccatt ttgtctgctc	60
cctctggaag ccttgccgag agcggacttt gtaattgttg gagaataact gctgaatttt	120
wagctgtttk gagttgatts gcaccactgc acccacaact tcaatatgaa aacyawttga	180
actwatttat tatcttgtga aaagtataac aatgaaaatt ttgttcatac tgtattkac	240

```

aagtatgatg aaaagcaawa gatatatatt cttttattat gttaaattat gattgccatt 300
attaatcggc aaaatgtgga gtgtatgttc ttttcacagt aatatatgcc ttttgtaact 360
tcacttggtt attttattgt aaatgartta caaaattctt aatttaagar aatggtagt 420
watatttatt tcattaattt ctttcctkgt ttacgtwaat tttgaaaaga wtgcatgatt 480
tcttgacaga aatcgatctt gatgctgtgg aagtagtttg acccacatcc ctatgagttt 540
ttcttagaat gtataaagggt tgtagcccat cnaacttcaa agaaaaaat gaccacatac 600
tttgcaatca ggctgaaatg tggcatgctn ttctaattcc aactttataa actagcaaan 660
aagtg 665

```

```

<210> 197
<211> 492
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(492)
<223> n = A,T,C or G

```

```

<400> 197
tttntttttt ttttttttgc aggaaggatt ccatttattg tggatgcatt ttcacaatat 60
atgtttattg gagcgatcca ttatcagtga aaagtatcaa gtgtttataa natttttagg 120
aaggcagatt cacagaacat gctngtcngc ttgcagtttt acctcgtana gatnacagag 180
aattatagtc naaccagtaa acnaggaatt tacttttcaa aagattaaat ccaaactgaa 240
caaaattcta ccctgaaact tactccatcc aaatattgga ataanagtca gcagtgatac 300
attctcttct gaacttttaga ttttctagaa aaatattgta tagtgatcag gaagagctct 360
tgttcaaaag tacaacnaag caatgttccc ttaccatagg ccttaattca aactttgatc 420
catttcactc ccatacggg agtcaatgct acctgggaca cttgtatttt gttcatnctg 480
ancntggctt aa 492

```

```

<210> 198
<211> 478
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(478)
<223> n = A,T,C or G

```

```

<400> 198
tttnttttgn atttcantct gtannaanta ttttcattat gtttattana aaaatatnaa 60
tgtntccacn acaaatcatn ttacntnagt aagaggccan ctacattgta caacatacac 120
tgagtatatt ttgaaaagga caagttttaa gtanacncat attgccganc atancacatt 180
tatacatggc ttgattgata tttagcacag canaaactga gtgagttacc agaaanaaat 240
natatatgtc aatcngattt aagatacaaa acagatccta tggtagatan catcntgtag 300
gagttgtggc tttatgttta ctgaaagtca atgcagttcc tgtacaaaga gatggccgta 360
agcattctag tacctctact ccattgggtta gaatcgtaca cttatgttta catatgtnta 420
gggtaagaat tgtgttaagt naanttatgg agagggtccan gagaaaaatt tgatncaa 478

```

```

<210> 199
<211> 482
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(482)
<223> n = A,T,C or G

```

```

<400> 199
agtgacttgt cctccaacaa aacccttga tcaagtttgt ggcactgaca atcagacctta 60

```

```
<220>  
<221> misc_feature  
<222> (1)...(270)  
<223> n = A,T,C or G
```

```
<210> 201
<211> 419
<212> DNA
<213> Homo sapien
```

```
<220>
<221> misc_feature
<222> (1)...(419)
<223> n = A,T,C or G
```

```
<210> 202
<211> 509
<212> DNA
<213> Homo sapien
```

```
<220>
<221> misc_feature
<222> (1)...(509)
<223> n = A,T,C or G
```

<400> 202						
tttntttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	60
tggcacttaa	tccattttta	tttcaaaatg	tctacaaant	ttnaatncnc	cattatacng	120
gtnattttnc	aaaatctaaa	nnttattcaa	atntnagcca	aantccttac	ncaaatnnaa	180
tacncncaaa	aatcaaaaaa	atacntntct	ttcagcaaac	ctngttacat	aaattaaaaa	240
aatatatacg	gctgggtgtt	tcaaagtaca	attatcttaa	cactgcaaac	atntttnnaa	300
ggaactaaaa	taaaaaaaaa	cactnccgca	aaggttaaag	ggaacaacaa	attcntttta	360

```

caacancnnc nattataaaa atcatatctc aaatcttagg ggaatatata cttcacacng      420
ggatcttaac ttttactnca ctttgtttat ttttttanaa ccattgtntt gggcccaaca      480
caatggnaat nccnccnnc tggactagt                                     509

```

```

<210> 203
<211> 583
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(583)
<223> n = A,T,C or G

```

```

<400> 203
tttttttttt ttttttttga cccccctctt ataaaaaaca agttaccatt ttatttttact      60
tacacatatt tattttataa ttggtattag atattcaaaa ggcagctttt aaaatcaaac      120
taaattgaaa ctgccttaga tacataattc ttaggaatta gcttaaaatc tgcctaaagt      180
gaaaatcttc tctagctctt ttgactgtaa atttttgact cttgtaaaac atccaaattc      240
atttttcttg tctttaaaaa tatctaactt ttccattttt tccctattcc aagtcaattt      300
gcttctctag cctcatttcc tagctcttat ctactattag taagtggctt ttttcctaaa      360
agggaaaaca ggaagagana atggcacaca aaacaaacat tttatattca tatttctacc      420
tacgttaata aaatagcatt ttgtgaagcc agctcaaaag aaggcttaga tccttttatg      480
tccattttag tcaactaaacg atatcnaaag tgccagaatg caaaagggtt gtgaacattt      540
attcaaaagc taatataaga tatttcacat actcatcttt ctg                                     583

```

```

<210> 204
<211> 589
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(589)
<223> n = A,T,C or G

```

```

<400> 204
ttttttttnt tttttttttt ttttttnctc ttcttttttt ttganaatga ggatcgagtt      60
tttactcttc tagatagggc atgaagaaaa ctcatctttc cagcttttaa ataacaatca      120
aatctcttat gctatatcat attttaagtt aaactaatga gtcactggct tatcttctcc      180
tgaaggaaat ctgttcattc ttctcattca tatagttata tcaagtacta ccttgcatat      240
tgagagggtt ttcttctcta ttacacata tatttccatg tgaatttgta tcaaaccctt      300
attttcatgc aaactagaaa ataattgntt cttttgcata agagaagaga acaatatnag      360
cattacaaaa ctgctcaaat tgtttgtaa gnntatccat tataattagt tnggcaggag      420
ctaatacaaa tcacatttac ngacnagcaa taataaaact gaagtaccag ttaaataatcc      480
aaaataatta aaggaacatt tttagcctgg gtataattag ctaattcact ttacaagcat      540
ttattnagaa tgaattcaca tgttattatt ccntagccca acacaatgg                                     589

```

```

<210> 205
<211> 545
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(545)
<223> n = A,T,C or G

```

```

<400> 205
ttttnttttt ttttttcagt aataatcaga acaatattta tttttatatt taaaattcat      60
agaaaagtcg cttacattta ataaaagttt gtttctcaaa gtgatcagag gaattagata      120
tngtcttgaa caccaatatt aatttgagga aaatacacca aaatacatta agtaaattat      180

```

ttaagatcat	agagcttgta	agtgaaaaga	taaaatttga	cctcagaaac	tctgagcatt	240
aaaaatccac	tattagcaaa	taaattacta	tggacttctt	gctttaattt	tgtgatgaat	300
atggggtgtc	actggtaaac	caacacattc	tgaaggatac	attacttagt	gatagattct	360
tatgtacttt	gctanatnac	gtggatatga	gttgacaagt	ttctctttct	tcaatctttt	420
aaggggcnga	ngaaatgagg	aagaaaagaa	aaggattacg	catactgttc	tttctatngg	480
aaggattaga	tatgtttcct	ttgccaatat	taaaaaata	ataatgttta	ctactagtga	540
aacc						545

<210> 206  
 <211> 487  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(487)  
 <223> n = A,T,C or G

<400> 206	
tttttttttt	tttttttagtc aagttttctna tttttatttat aattaaagtc ttggtcattt 60
catttattag	ctctgcaact tacatattta aattaaagaa acgttnttag acaactgtna 120
caatttataa	atgtaagggtg ccattattga gtanatatat tcctccaaga gtggatgtgt 180
cccttctccc	accaactaat gaancagcaa cattagttaa attttattag tagatnatac 240
actgctgcaa	acgctaattc tcttctccat ccccatgtng atattgtgta tatgtgtgag 300
ttggttagaa	tgcatacanca atctnacaat caacagcaag atgaagctag gcntgggctt 360
tcggtgaaaa	tagactgtgt ctgtctgaat caaatgatct gacctatcct cgggtggcaag 420
aactcttcga	accgcttctt caaaggcngc tgccacattt gtggcntctn ttgcacttgt 480
ttcaaaa	
	487

<210> 207  
 <211> 332  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(332)  
 <223> n = A,T,C or G

<400> 207	
tgaattggct	aaaagactgc atttttanaa ctagcaactc ttatttcttt cctttaaaaa 60
tacatagcat	taaatcccaa atcctattta aagacctgac agcttgagaa ggtcactact 120
gcatttatag	gaccttctgg tggttctgct gttacntttg aantctgaca atccttgana 180
atctttgcat	gcagaggagg taaaagggtat tggattttca cagaggaana acacagcgca 240
gaaatgaagg	ggccaggctt actgagcttg tccactggag ggctcatggg tgggacatgg 300
aaaagaaggc	agcctaggcc ctggggagcc ca
	332

<210> 208  
 <211> 524  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(524)  
 <223> n = A,T,C or G

<400> 208	
agggcgtggt	gcgaggggcg ttactgtttt gtctcagtaa caataaatac aaaaagactg 60
gttgtgttcc	ggcccatcc aaccacgaag ttgatttctc ttgtgtgcag agtgactgat 120
tttaaaggac	atggagcttg tcacaatgtc acaatgtcac agtgtgaagg gcacactcac 180
tcccgcgtga	ttcacattta gcaaccaaca atagctcatg agtccatact tgtaaatact 240

tttggcagaa	tacttnttga	aacttgcaga	tgataactaa	gatccaagat	atttcccaaa	300
gtaaataagaa	gtgggtcata	atattaatta	cctgttcaca	tcagcttcca	tttacaagtc	360
atgagcccag	acactgacat	caaactaagc	ccacttagac	tcctcaccac	cagtctgtcc	420
tgtcatcaga	caggaggctg	tcaccttgac	caaattctca	ccagtcaatc	atctatccaa	480
aaaccattac	ctgatccact	tccggtaatg	caccaccttg	gtga		524

<210> 209  
 <211> 159  
 <212> DNA  
 <213> Homo sapien

<400> 209						
gggtgaggaa	atccagagtt	gccatggaga	aaattccagt	gtcagcattc	ttgtccttg	60
tggccctctc	ctacactctg	gccagagata	ccacagtcaa	acctggagcc	aaaaaggaca	120
caaaggactc	tcgacccaaa	ctgccccaga	ccctctcca			159

<210> 210  
 <211> 256  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(256)  
 <223> n = A,T,C or G

<400> 210						
actccctggc	agacaaaggc	agaggagaga	gctctgttag	ttctgtgttg	ttgaactgcc	60
actgaatttc	tttccacttg	gactattaca	tgccanttga	gggactaatg	gaaaaacgta	120
tggggagatt	ttanccaatt	tangtntgta	aatggggaga	ctggggcagg	cgggagagat	180
ttgcagggtg	naaatgggan	ggctgggttg	ttanatgaac	agggacatag	gaggtaggca	240
ccaggatgct	aaatca					256

<210> 211  
 <211> 264  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(264)  
 <223> n = A,T,C or G

<400> 211						
acattgtttt	tttgagataa	agcattgaga	gagctctcct	taacgtgaca	caatggaagg	60
actggaacac	ataccacat	ctttgttctg	agggataatt	ttctgataaa	gtcttgctgt	120
atattcaagc	acatatgtta	tatattattc	agttccatgt	ttatagccta	gttaaggaga	180
ggggagatac	attcngaaag	aggactgaaa	gaaatactca	agtnngaaaa	cagaaaaaga	240
aaaaaaggag	caaatgagaa	gcct				264

<210> 212  
 <211> 328  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(328)  
 <223> n = A,T,C or G

<400> 212						
acccaaaaat	ccaatgctga	atatttggtc	tcattattcc	canattcttt	gattgtcaaa	60

ggattttaatg	ttgtctcagc	ttgggcactt	cagttaggac	ctaaggatgc	cagccggcag	120
gtttatatat	gcagcaacaa	tattcaagcg	cgacaacagg	ttattgaact	tgcccgccag	180
ttnaattttca	ttcccattga	cttgggatcc	ttatcatcag	ccagagagat	tgaaaattta	240
cccctacnac	tctttactct	ctgganaggg	ccagtgggtg	tagctataag	cttggccaca	300
tttttttttc	ctttattcct	ttgtcaga				328

<210> 213  
 <211> 250  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(250)  
 <223> n = A,T,C or G

<400> 213						
acttatgagc	agagcgacat	atccnagtgt	agactgaata	aaactgaatt	ctctccagtt	60
taaagcattg	ctcactgaag	ggatagaagt	gactgccagg	agggaaagta	agccaaggct	120
cattatgcca	aagganatat	acatttcaat	tctccaaact	tcttcctcat	tccaagagtt	180
ttcaatattt	gcatgaacct	gctgataanc	catgttaana	aacaaatata	tctctnacct	240
tctcatcggt						250

<210> 214  
 <211> 444  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(444)  
 <223> n = A,T,C or G

<400> 214						
acccagaatc	caatgctgaa	tatttggtt	cattattccc	agattccttg	attgtcaaag	60
gattttaatg	tgtctcagct	tgggcacttc	agttaggacc	taaggatgcc	agccggcagg	120
tttatatatg	cagcaacaat	attcaagcgc	gacaacagg	tattgaactt	gcccgccagt	180
tgaatttcat	tcccattgac	ttgggatcct	tatcatcagc	canagagatt	gaaaattttac	240
ccctacgact	ctttactctc	tggagagggc	cagtgggtgt	agctataagc	ttggccacat	300
ttttttttcc	tttattcctt	tgtcagagat	gcgattccat	catatgctan	aaaccaacag	360
agtgactttt	acaaaattcc	tataganatt	gtgaataaaa	ccttacctat	agttgccatt	420
actttgctct	ccctaataata	cctc				444

<210> 215  
 <211> 366  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(366)  
 <223> n = A,T,C or G

<400> 215						
acttatgagc	agagcgacat	atccaagtgt	anactgaata	aaactgaatt	ctctccagtt	60
taaagcattg	ctcactgaag	ggatagaagt	gactgccagg	agggaaagta	agccaaggct	120
cattatgcca	aagganatat	acatttcaat	tctccaaact	tcttcctcat	tccaagagtt	180
ttcaatattt	gcatgaacct	gctgataagc	catgttgaga	aacaaatata	tctctgacct	240
tctcatcggt	aagcagaggg	tgtaggcaac	atggaccata	gcgaanaaaa	aacttagtaa	300
tccaagctgt	tttctacact	gtaaccaggt	ttccaaccaa	ggtggaaatc	tcctatactt	360
ggtgcc						366



<210> 216  
 <211> 260  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(260)  
 <223> n = A,T,C or G

<400> 216  
 ctgtataaac agaactccac tgcangaggg agggccgggc caggagaatc tccgcttgct 60  
 caagacaggg gcctaaggag ggtctccaca ctgctnntaa gggctnttnc atttttttat 120  
 taataaaaag tnnaaaaggc ctcttctcaa cttttttccc ttnggctgga aaatttaaaa 180  
 atcaaaaatt tcctnaagtt ntcaagctat catatatact ntatcctgaa aaagcaacat 240  
 aattcttctt tccctccttt 260

<210> 217  
 <211> 262  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(262)  
 <223> n = A,T,C or G

<400> 217  
 acctacgtgg gtaagtttan aaatgttata atttcaggaa naggaacgca tataattgta 60  
 tcttgcttat aattttctat ttttaataagg aaatagcaaa ttgggggtgg gggaatgtag 120  
 ggcattctac agtttgagca aaatgcaatt aaatgtggaa ggacagcact gaaaaatttt 180  
 atgaataatc tgtatgatta tatgtctcta gagtagattt ataattagcc acttacccta 240  
 atatccttca tgcttgtaaa gt 262

<210> 218  
 <211> 205  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(205)  
 <223> n = A,T,C or G

<400> 218  
 accaaggtgg tgcattaccg gaantggatc aangacacca tegtggccaa cccctgagca 60  
 cccctatcaa ctcccttttg tagtaaaactt ggaaccttgg aaatgaccag gccaagactc 120  
 aggctcccc agttctactg acctttgtcc ttangtntna ngtcagggt tgctaggaaa 180  
 anaaatcagc agacacaggt gtaaa 205

<210> 219  
 <211> 114  
 <212> DNA  
 <213> Homo sapien

<400> 219  
 tactgttttg tctcagtaac aataaatata aaaagactgg ttgtgttccg gccccatcca 60  
 accacgaagt tgatttctct tgtgtgcaga gtgactgatt ttaaaggaca tggg 114

<210> 220  
 <211> 93  
 <212> DNA

<213> Homo sapien

<400> 220

actagccagc acaaaaggca gggtagcctg aattgctttc tgctctttac atttctttta 60  
aaataagcat ttagtgctca gtccttactg agt 93

<210> 221

<211> 167

<212> DNA

<213> Homo sapien

<220>

<221> misc\_feature

<222> (1)...(167)

<223> n = A,T,C or G

<400> 221

actangtgca ggtgcgcaca aatatttgtc gatattccct tcatcttgga ttccatgagg 60  
tcttttgccc agcctgtggc tctactgtag taagttttctg ctgatgagga gccagnatgc 120  
ccccactac cttccctgac gctccccana aatcacccaa cctctgt 167

<210> 222

<211> 351

<212> DNA

<213> Homo sapien

<400> 222

agggcggtgt gcgaggggcg gtactgacct cattagtagg aggatgcatt ctggcacccc 60  
gttcttcacc tgtcccccaa tccttaaaag gccatactgc ataaagtcaa caacagataa 120  
atgtttgctg aattaaagga tggatgaaaa aaattaataa tgaatttttg cataatccaa 180  
ttttctcttt tatatttcta gaagaagttt ctttgagcct attagatccc gggaatcttt 240  
taggtgagca tgattagaga gcttgtaggt tgctttttaca tatactctggc atatttgagt 300  
ctcgtatcaa aacaatagat tggtaaagggt ggtattattg tattgataag t 351

<210> 223

<211> 383

<212> DNA

<213> Homo sapien

<220>

<221> misc\_feature

<222> (1)...(383)

<223> n = A,T,C or G

<400> 223

aaaacaaaca aacaaaaaaa acaattcttc attcagaaaa attatcttag ggactgatat 60  
tggttaattat ggtcaattta atwrttrttk ggggcatttc cttacattgt cttgacaaga 120  
ttaaaatgtc tgtgccaaaa ttttgtattt tatttgagga cttcttatca aaagtaatgc 180  
tgccaaagga agtctaagga attagtagtg ttcccmteac ttgtttgagg tgtgctattc 240  
taaaagattt tgatttcctg gaatgacaat tatattttta ctttggtggg ggaaanagtt 300  
ataggaccac agtcttcact tctgatactt gtaaattaat cttttattgc acttgttttg 360  
accattaagc tatatgttta aaa 383

<210> 224

<211> 320

<212> DNA

<213> Homo sapien

<400> 224

cccctgaagg cttcttggtta gaaaatagta cagttacaac caataggaac aacaaaaaga 60  
aaaagtttgt gacattgtag tagggagtggt gtaccctcta ctcccatca aaaaaaaat 120  
ggatacatgg ttaaaggata raagggaat attttatcat atgttctaaa agagaaggaa 180

gagaaaatac tacttttctc	aaatggaagc ccttaaaggt	gctttgatac tgaaggacac	240
aaatgtggcc gtccatcctc	ctttaragtt gcatgacttg	gacacggtaa ctgttgacgt	300
tttaractcm gcattgtgac			320

<210> 225  
 <211> 1214  
 <212> DNA  
 <213> Homo sapien

<400> 225

gaggactgca gccgcactc	gcagccctgg caggcggcac	tgggtcatgga aaacgaattg	60
ttctgctcgg gcgtcctggt	gcatccgcag tgggtgctgt	cagccgcaca ctgtttccag	120
aactcctaca ccacggggt	gggcctgcac agtcttgagg	ccgaccaaga gccagggagc	180
cagatgggtg aggccagcct	ctccgtacgg caccagagt	acaacagacc cttgctcgct	240
aacgacctca tgctcatcaa	gttggacgaa tccgtgtccg	agtctgacac catccggagc	300
atcagcattg cttcgcagtg	ccctaccgcg gggaactctt	gcctcgtttc tggctggggg	360
ctgctggcga acggcagaat	gcctaccgtg ctgcagtgcg	tgaacgtgtc ggtggtgtct	420
gaggaggtct gcagtaagct	ctatgacccg ctgtaccacc	ccagcatggt ctgcgcggc	480
ggagggcaag accagaagga	ctcctgcaac ggtgactctg	ggggggccct gatctgcaac	540
gggtacttgc agggccttgt	gtctttcgga aaagcccgt	gtggccaagt tggcgtgcca	600
ggtgtctaca ccaacctctg	caaatcact gagtggatag	agaaaaccgt ccaggccagt	660
taactctggg gactgggaac	ccatgaaatt gacccccaaa	tacatcctgc ggaaggaatt	720
caggaatata tgttcccagc	ccctcctccc tcaggcccag	gagtcaggc cccagccccc	780
tcctccctca aaccaagggt	acagatcccc agcccctcct	ccctcagacc caggagtcca	840
gacccccag cccctcctcc	ctcagaccca ggagtccagc	ccctcctccc tcagaccag	900
gagtcagac cccccagccc	ctcctccctc agaccaggg	gtccaggccc ccaaccctc	960
ctcctcaga ctcagaggtc	caagccccca acccctcctt	ccccagacc agaggtccag	1020
gtccagccc cctcctccctc	agaccagcg gtccaatgcc	acctagactc tccctgtaca	1080
cagtgcctccc ttgtggcag	ttgacccaac cttaccagtt	ggtttttcat tttttgtccc	1140
tttccctag atccagaaat	aaagtctaag agaagcgcaa	aaaaaaaaa aaaaaaaaaa	1200
aaaaaaaaa aaaa			1214

<210> 226  
 <211> 119  
 <212> DNA  
 <213> Homo sapien

<400> 226

accagtatg tgcagggaga	cggaacccca tgtgacagcc	cactccacca gggttcccaa	60
agaacctggc ccagtcataa	tcattcatcc tgacagtggc	aataatcacg ataaccagt	119

<210> 227  
 <211> 818  
 <212> DNA  
 <213> Homo sapien

<400> 227

acaattcata gggacgacca	atgaggacag ggaatgaacc	cggctctccc ccagccctga	60
tttttgctac atatggggtc	ccttttcatt ctttgcaaaa	acactgggtt ttctgagaac	120
acggacgggt cttagcacia	tttgtgaaat ctgtgtaraa	ccgggctttg caggggagat	180
aattttcctc ctctggagga	aaggtggtga ttgacaggca	gggagacagt gacaaggcta	240
gagaaagcca cgctcggcct	tctctgaacc aggatggaac	ggcagacccc tgaaaacgaa	300
gcttgctccc ttccaatcag	ccacttctga gaacccccat	ctaacttct actggaaaag	360
agggcctcct caggagcagt	ccaagagttt tcaaagataa	cgtgacaact accatctaga	420
ggaaaggggt caccctcagc	agagaagccg agagcttaac	tctggctggt tccagagaca	480
acctgctggc tgtcttgga	tgcgcccagc ctttgagagg	ccactacccc atgaacttct	540
gccatccact ggacatgaag	ctgaggacac tgggcttcaa	cactgagttg tcatgagagg	600
gacaggtctc gccctcaagc	cggctgaggg cagcaaccac	tctcctccc tttctcagc	660
aaagccattc ccacaaatcc	agaccatacc atgaagcaac	gagacccaaa cagtttggt	720
caagaggata tgaggactgt	ctcagcctgg ctttgggctg	acaccatgca cacacacaag	780
gtccacttct aggttttcag	cctagatggg agtcgtgt		818

<210> 228  
 <211> 744  
 <212> DNA  
 <213> Homo sapien

<400> 228  
 actggagaca ctgttgaact tgatcaagac ccagaccacc ccaggtctcc ttctgtgggat 60  
 gtcattgacgt ttgacatacc tttggaacga gcctcctcct tggaagatgg aagaccgtgt 120  
 tcgtggccga cctggcctct cctggcctgt ttcttaagat gcggagtcac atttcaatgg 180  
 taggaaaagt ggcttcgtaa aatagaagag cagtcactgt ggaactacca aatggcgaga 240  
 tgctcgggtgc acattgggtt gctttgggat aaaagattta tgagccaact attctctggc 300  
 accagattct aggccagttt gttccactga agcttttccc acagcagtc acctctgcag 360  
 gctggcagct gaatggcttg ccggtggctc tgtggcaaga tcacactgag atcgatgggt 420  
 gagaaggcta ggatgcttgt ctagtgttct tagctgtcac gttggctcct tccagggttg 480  
 ccagacgggtg ttggccactc ccttctaaaa cacaggcgcc ctctgtgtga cagtgacccg 540  
 ccgtgggtatg ccttggccca ttccagcagt cccagttatg catttcaagt ttggggtttg 600  
 ttcttttctg taatgttctt ctgtgttgct agctgtcttc atttctggg ctaagcagca 660  
 ttggggagatg tggaccagag atccactcct taagaaccag tggcgaaaga cactttcttt 720  
 cttcactctg aagtagctgg tgggt 744

<210> 229  
 <211> 300  
 <212> DNA  
 <213> Homo sapien

<400> 229  
 cgagtctggg ttttgtctat aaagtttgat ccctcctttt ctcatccaaa tcatgtgaac 60  
 cattacacat cgaaataaaa gaaagggtggc agacttgccc aacgccaggc tgacatgtgc 120  
 tgcagggttg ttgtttttta attattattg tttagaaacgt caccacagct cctgtttaat 180  
 ttgtatgtga cagccaactc tgagaaggct ctatttttcc acctgcagag gatccagtct 240  
 cactaggctc ctcttgccc tcacactgga gtctccgcca gtgtgggtgc ccactgacat 300

<210> 230  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 230  
 cagcagaaca aatacaata tgaagagtgc aaagatctca taaaatctat gctgaggaat 60  
 gagcgacagt tcaaggagga gaagcttgca gagcagctca agcaagctga ggagctcagg 120  
 caatataaag tcctggttca cactcaggaa cgagagctga cccagttaag ggagaagttg 180  
 cgggaaggga gagatgcctc cctctcattg aatgagcatc tccaggccct cctcactccg 240  
 gatgaaccgg acaagtccca ggggcaggac ctccaagaaa cagacctcgg ccgcgaccac 300  
 g 301

<210> 231  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 231  
 gcaagcacgc tggcaaactc ctgtcaggtc agctccagag aagccattag tcatttttagc 60  
 caggaactcc aagtccacat ccttggcaac tggggacttg cgcaggttag ccttgaggat 120  
 ggcaacacgg gacttctcat caggaagtgg gatgtagatg agctgatcaa gacggccagg 180  
 tctgaggatg gcaggatcaa tgatgtcagg ccggttggtta ccgccaatga tgaacacatt 240  
 tttttttgtg gacatgccat ccatttctgt caggatctgg ttgatgactc ggtcagcagc 300  
 c 301

<210> 232  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 232  
 agtaggtatt tctgtgagaag ttcaacacca aaactggaac atagttctcc ttcaagtgtt 60  
 ggcgacagcg gggcttcctg attctggaat ataactttgt gtaaattaac agccacctat 120  
 agaagagtcc atctgctgtg aaggagagac agagaactct gggttccgtc gtcctgtcca 180  
 cgtgctgtac caagtgtctg tgccagcctg ttacctgttc tcaactgaaa tctggctaata 240  
 gctcttgtgt atcacttctg attctgacaa tcaatcaatc aatggcctag agcactgact 300  
 g 301

<210> 233  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 233  
 atgactgact tcccagtaag gctctctaag gggtaagtag gaggatccac aggatttgag 60  
 atgctaaggc cccagagatc gtttgatcca accctcttat ttccagaggg gaaaatgggg 120  
 cctagaagtt acagagcatc tagctggtgc gctggcacc cttggcctcac acagactccc 180  
 gagtagctgg gactacaggg acacagtcac tgaagcaggc cctgtagca attctatgag 240  
 tacaatttaa catgagatga gtagagactt tattgagaaa gcaagagaaa atcctatcaa 300  
 c 301

<210> 234  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 234  
 aggtcctaca catcgagact catccatgat tgatatgaat ttaaaaatta caagcaaaga 60  
 cattttattc atcatgatgc tttcttttgt ttcttctttt cgttttcttc tttttctttt 120  
 tcaatttcag caacataact ctcaatttct tcaggattta aaatcttgag ggattgatct 180  
 cgccatcatga cagcaagttc aatgtttttg ccacctgact gaaccacttc caggagtgcc 240  
 ttgatcacca gcttaatggc cagatcatct gttcaatgg cttcgtcagt atagttcttc 300  
 t 301

<210> 235  
 <211> 283  
 <212> DNA  
 <213> Homo sapien

<400> 235  
 tggggctgtg catcaggcgg gtttgagaaa tattcaattc tcagcagaag ccagaatttg 60  
 aattccctca tcttttaggg aatcatttac caggtttgga gaggattcag acagctcagg 120  
 tgctttcact aatgtctctg aacttctgtc cctctttgtt catggatagt ccaataaata 180  
 atgttatctt tgaactgatg ctcataggag agaataaag aactctgagt gatatcaaca 240  
 ttagggattc aaagaaatat tagatttaag ctccactgg tca 283

<210> 236  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 236  
 aggtcctcca ccaactgcct gaagcacggg taaaattggg aagaagtata gtgcagcata 60  
 aatactttta atcagatcag atttccctaa cccacatgca atcttcttca ccagaagagg 120  
 tcggagcagc atcatataa ccaagcagaa tgcgtaatat ataaatacaa tggatatatg 180  
 tgggtagacy gttcatgag tacagtgtac tgtggtatcg taatctggac ttgggttgta 240  
 aagcatcgtg taccagtcag aaagcatcaa tactcgacat gaacgaatat aaagaacacc 300  
 a 301

<210> 237  
 <211> 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 237

cagtggtagt	ggtggtggac	gtggcggttg	tcgtggtgcc	ttttttggtg	cccgtcacaa	60
actcaatttt	tggtcgctcc	tttttgacct	tttccaattt	gtccatctca	attttctggg	120
ccttggctaa	tgccctcatag	taggagtcct	cagaccagcc	atggggatca	aacataticct	180
ttgggtagtt	ggtgcccaagc	tcgtcaatgg	cacagaatgg	atcagcttct	cgtaaattcta	240
gggttccgaa	attctttctt	cctttggata	atgtagttca	tatccattcc	ctcctttatc	300
t						301

&lt;210&gt; 238

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 238

gggcaggttt	tttttttttt	ttttttgatg	gtgcagaccc	ttgctttatt	tgtctgactt	60
gttcacagtt	cagccccctg	ctcagaaaac	caacgggcca	gctaaggaga	ggaggaggca	120
ccttgagact	tccggagtcg	aggctctcca	gggttcccca	gcccatcaat	cattttctgc	180
acccccctgc	tgggaagcag	ctccctgggg	ggtgggaatg	ggtgactaga	agggatttca	240
gtgtgggacc	caggggtctgt	tcttcacagt	aggaggtgga	agggatgact	aattttctta	300
t						301

&lt;210&gt; 239

&lt;211&gt; 239

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 239

ataagcagct	agggaattct	ttatttagta	atgtcctaac	ataaaaagttc	acataactgc	60
ttctgtcaaa	ccatgatact	gagctttgtg	acaaccacga	aataactaag	agaaggcaaa	120
cataatacct	tagagatcaa	gaaacattta	cacagttcaa	ctgttttaaaa	atagctcaac	180
attcagccag	tgagtagagt	gtgaatgcc	gcatacacag	tatacaggtc	cttcaggga	239

&lt;210&gt; 240

&lt;211&gt; 300

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 240

ggtcctaagt	aagcagcagc	ttccacattt	taacgcaggt	ttacgggtgat	actgtccttt	60
gggatctgcc	ctccagtgg	accttttaag	gaagaagtgg	gccaagcta	agttccacat	120
gctgggtgag	ccagatgact	tctgttccct	ggtcactttc	ttcaatgggg	cgaatggggg	180
ctgccagggt	tttaaaatca	tgtttcatct	tgaagcacac	ggtcacttca	ccctctcac	240
gctgtgggtg	tactttgatg	aaaataccca	ctttgttggc	ctttctgaag	ctataatgtc	300

&lt;210&gt; 241

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 241

gaggtctggt	gctgaggtct	ctgggctagg	aagaggagtt	ctgtggagct	ggaagccaga	60
cctctttgga	ggaaactcca	gcagctatgt	tggtgtctct	gagggaatgc	aacaaggctg	120
ctcctccatg	tattggaaaa	ctgcaaactg	gactcaactg	gaaggaagtg	ctgctgccag	180
tgtgaagaac	cagcctgagg	tgacagaaac	ggaagcaaac	aggaacagcc	agtcttttct	240
tcctcctcct	gtcatacggg	ctctctcaag	catcctttgt	tgtcaggggc	ctaaaaggga	300
g						301

&lt;210&gt; 242

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 242

```

ccgagggtcct gggatgcaac caatcactct gtttcacgtg acttttatca ccatacaatt    60
tgtggcattt cctcattttc tacattgtag aatcaagagt gtaaataaat gtatatcgat    120
gtcttcaaga atatatcatt cctttttcac tagaaccat tcaaaatata agtcaagaat    180
cttaatatca acaaataat caagcaaact ggaaggcaga ataactacca taatttagta    240
taagtacca aagttttata aatcaaaagc cctaatagata accattttta gaattcaatc    300
a                                                                    301

```

&lt;210&gt; 243

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 243

```

aggtaagtcc cagtttgaag ctcaaaagat ctggtatgag catagggtca tcgacgacat    60
ggtggcccaa gctatgaaat cagagggagg cttcatctgg gcctgtaaaa actatgatgg    120
tgacgtgcag tcggactctg tggcccaagg gtatggctct ctcggcatga tgaccagcgt    180
gctggtttgt ccagatggca agacagtaga agcagaggct gccacggga ctgtaaccog    240
tcactaccgc atgttccaga aaggacagga gacgtccacc aatcccattg cttccatttt    300
t                                                                    301

```

&lt;210&gt; 244

&lt;211&gt; 300

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 244

```

gctggtttgc aagaatgaaa tgaatgattc tacagctagg acttaacctt gaaatggaaa    60
gtcatgcaat cccatttgca ggatctgtct gtgcacatgc ctctgtagag agcagcattc    120
ccaggacact tggaaacagt tgacactgta aggtgcttgc tccccaagac acatcctaaa    180
aggtgttgta atggtgaaaa cgtcttcctt ctttattgcc ccttcttatt tatgtgaaca    240
actgtttgtc ttttgtgtat cttttttaa ctgtaaagtt caattgtgaa aatgaatatc    300

```

&lt;210&gt; 245

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 245

```

gtctgagtat ttaaaatggt attgaaatta tccccaacca atgttagaaa agaaagaggt    60
tatatactta gataaaaaat gaggtgaatt actatccatt gaaatcatgc tcttagaatt    120
aaggccagga gatattgtca ttaatgtara cttcaggaca ctagagtata gcagccctat    180
gttttcaaag agcagagatg caattaaata ttgttttagca tcaaaaaggc cactcaatac    240
agctaataaa atgaaagacc taattttctaa agcaattcct tataattttac aaagttttaa    300
g                                                                    301

```

&lt;210&gt; 246

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 246

```

ggtctgtcct acaatgcctg cttcttgaaa gaagtcggca ctttctagaa tagctaaata    60
acctgggctt attttaaaga actatttgta gtcagattg gttttcctat ggctaaaata    120
agtgttctt gtgaaaatta aataaaacag ttaattcaaa gccttgatat atgttaccac    180
taacaatcat actaaatata ttttgaagta caaagtttga catgctctaa agtgacaacc    240
caaatgtgtc ttacaaaaca cgttcctaac aaggtatgct ttacactacc aatgcagaaa    300
c                                                                    301

```

<210> 247  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 247  
 aggtcctttg gcagggctca tggatcagag ctcaaactgg agggaaaggc atttcgggta 60  
 gcctaagagg gcgactggcg gcagcacaac caaggaaggc aaggttggtt ccccccacgt 120  
 gtgtcctgtg ttcaggtgcg acacacaatc ctcatgggaa caggatcacc catgcgctgc 180  
 ccttgatgat caaggttggg gcttaagtgg attaaggag gcaagttctg ggttccttgc 240  
 cttttcaaac catgaagtca ggctctgtat ccctcctttt cctaactgat attctaacta 300  
 a 301

<210> 248  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 248  
 aggtccttgg agatgccatt tcagccgaag gactcttctw ttcggaagta caccctcact 60  
 attaggaaga ttcttagggg taatttttct gaggaaggag aactagccaa ctttaagaatt 120  
 acaggaagaa agtggtttgg aagacagcca aagaaataaa agcagattaa attgtatcag 180  
 gtacattcca gcctgttggc aactccataa aaacatttca gattttaatc ccgaatttag 240  
 ctaatgagac tggatttttg ttttttatgt tgtgtgtcgc agagctaaaa actcagttcc 300  
 c 301

<210> 249  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 249  
 gtccagagga agcacctggt gctgaactag gcttgccctg ctgtgaactt gcaattggag 60  
 ccctgacgct gctgttctcc ccgaaaaacc cgaccgacct ccgcgatctc cgtcccgcgc 120  
 ccagggagac acagcagtga ctacagagctg gtgcgacact gtgcctccct cctcaccgcc 180  
 catcgtaatg aattattttg aaaattaatt ccaccatcct ttcagattct ggatggaaag 240  
 actgaatctt tgactcagaa ttgtttgctg aaaagaatga tgtgactttc ttagtcattt 300  
 a 301

<210> 250  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 250  
 ggtctgtgac aaggacttgc aggctgtggg aggcaagtga cccttaacac tacacttctc 60  
 cttatcttta ttggcttgat aaacataatt atttctaaca ctagcttatt tccagttgcc 120  
 cataagcaca tcagtacttt tctctggctg gaatagtaaa ctaaaagtatg gtacatctac 180  
 ctaaaagact actatgtgga ataatacata ctaatgaagt attacatgat ttaaagacta 240  
 caataaaacc aaacatgctt ataacattaa gaaaaacaat aaagatacat gattgaaacc 300  
 a 301

<210> 251  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 251  
 gccgaggtcc tacatttggc ccagtttccc cctgcatcct ctccagggcc cctgcctcat 60  
 agacaacctc atagagcata ggagaactgg ttgccttggg ggcaggggga ctgtctggat 120  
 ggcaggggtc ctcaaaaatg ccactgtcac tgccaggaaa tgcttctgag cagtacacct 180  
 cattgggatc aatgaaaagc ttcaagaaat cttcaggctc actctcttga aggccccgaa 240



cctctggagg ggggcagtgg aatcccagct ccaggacgga tcctgtcgaa aagatatacct 300  
c 301

<210> 252  
<211> 301  
<212> DNA  
<213> Homo sapien

<400> 252  
gcaaccaatc actctgtttc acgtgacttt tatcaccata caatttgtgg catttcctca 60  
ttttctacat tgtagaatca agagtgtaaa taaatgtata tcgatgtctt caagaatata 120  
tcatttccttt ttacttagga acccattcaa aatataagtc aagaatctta atatcaacaa 180  
atatatcaag caaactggaa ggcagaataa ctaccataat ttagtataag tacccaaagt 240  
tttataaatc aaaagcccta atgataacca tttttagaat tcaatcatca ctgtagaatc 300  
a 301

<210> 253  
<211> 301  
<212> DNA  
<213> Homo sapien

<400> 253  
ttccctaaga agatgttatt ttgttgggtt ttgttccccc tccatctcga ttctcgtacc 60  
caactaaaaa aaaaaaataa agaaaaaatg tgctgcgttc tgaaaaataa ctcccttagct 120  
tggtctgatt gttttcagac cttaaaatat aaacttggtt cacaagcttt aatccatgtg 180  
gatttttttt cttagagAAC cacaaaacat aaaaggagca agtcggactg aatacctgtt 240  
tccatagtgc ccacagggtta ttcttcacat tttctccata ggaaaatgct ttttcccaag 300  
g 301

<210> 254  
<211> 301  
<212> DNA  
<213> Homo sapien

<400> 254  
cgctgcgcct ttcccttggg ggaggggcaa ggccagaggg ggtccaagtg cagcacgagg 60  
aacttgacca attcccttga agcgggtggg ttaaaccctg taaatgggaa caaaatcccc 120  
ccaaatctct tcatcttacc ctggtggact cctgactgta gaattttttg gttgaaacaa 180  
gaaaaaaata aagcttttga cttttcaagg ttgcttaaca ggtactgaaa gactggcctc 240  
acttaaactg agccaggaaa agctgcagat ttattaatgg gtgtgttagt gtgcagtgcc 300  
t 301

<210> 255  
<211> 302  
<212> DNA  
<213> Homo sapien

<400> 255  
agcttttttt tttttttttt tttttttttt ttcattaaaa aatagtgtct tttattataa 60  
attactgaaa tgtttctttt ctgaatataa atataaatat gtgcaaagtt tgacttggat 120  
tggtgatttg ttgagttctt caagcatctc ctaataccct caagggcctg agtagggggg 180  
aggaaaaagg actggagggt gaatctttat aaaaaacaag agtgattgag gcagattgta 240  
aacattatta aaaaacaaga aacaaacaaa aaaatagaga aaaaaaccac cccaacacac 300  
aa 302

<210> 256  
<211> 301  
<212> DNA  
<213> Homo sapien

<220>  
<221> misc\_feature

&lt;222&gt; (1)...(301)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 256

```

gttcacagaaa acattgaagg tggttccca aagtctaact agggataccc cctctagcct      60
aggaccctcc tccccacacc tcaatccacc aaaccatcca taatgcaccc agataggccc      120
acccccaaaa gcctggacac cttgagcaca cagttatgac caggacagac tcatctctat      180
aggcaaatac ctgctggcaa actggcatta cctgggttgt ggggatggg gggcaagtgt      240
gtggcctctc ggctgggta gcaagaacat tcagggttagg cctaagttan tcgtgttagt      300
t                                                                                   301

```

&lt;210&gt; 257

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 257

```

gttggtggagg aactctggct tgctcattaa gtctactga ttttactat cccctgaatt      60
tccccactta tttttgtctt tcaactatgc aggccttaga agaggtctac ctgcctocag      120
tcttacctag tccagtctac cccctggagt tagaatggcc atcctgaagt gaaaagtaat      180
gtcacattac tcccttcagt gatttcttgt agaagtgcc atccctgaat gccaccaaga      240
tcttaattctt cacatcttta atcttatctc ttgactcct ctttacaccg gagaaggctc      300
c                                                                                   301

```

&lt;210&gt; 258

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(301)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 258

```

cagcagtagt agatgccgta tgccagcacg cccagcactc ccaggatcag caccagcacc      60
agggggcccag ccaccaggcg cagaagcaag ataaacagta gggtcaagac cagagccacc      120
cccaggggcaa caagaatcca ataccaggac tgggcaaat cttcaaagat cttaacactg      180
atgtctcggg cattgaggct gtcaataana cgctgatccc ctgctgtatg gtggtgtcat      240
tgggtgatccc tgggagcgcc ggtggagtaa cgttggtcca tggaaagcag cgcccacaac      300
t                                                                                   301

```

&lt;210&gt; 259

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(301)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 259

```

tcatatatgc aaacaaatgc agactangcc tcaggcagag actaaaggac atctcttggg      60
gtgtcctgaa gtgatttggg cccctgaggg cagacaccta agtaggaatc ccagtgggaa      120
gcaaagccat aaggaagccc aggattcctt gtgatcagga agtgggccag gaaggtctgt      180
tccagctcac atctcatctg catgcagcac ggaccggatg cgccactgg gtcttggctt      240
ccctcccatc ttctcaagca gtgtccttgt tgagccattt gcatccttgg ctccagggtg      300
c                                                                                   301

```

&lt;210&gt; 260

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 260

```

ttttttttct ccctaaggaa aaagaaggaa caagtctcat aaaaccaaat aagcaatggt      60
aagggtgtctt aacttgaaaa agattaggag tctactgggtt acaagttata attgaatgaa      120
agaactgtaa cagccacagt tggccatttc atgccaatgg cagcaaacia caggattaac      180
tagggcaaaa taaataagtg tgtggaagcc ctgataagtg cttataaac agactgattc      240
actgagacat cagtacctgc ccgggcggcc gctcgagccg aattctgcag atatccatca      300
c

```

&lt;210&gt; 261

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 261

```

aaatattcga gcaaatcctg taactaatgt gtctccataa aaggctttga actcagtga      60
tctgcttcca tccacgattc tagcaatgac ctctcggaca tcaaagctcc tcttaaggtt      120
agcaccaact attccatata attcatcagc aggaaataaa ggctcttcag aagggttcaat      180
ggtgacatcc aattttcttct gataatttag attcctcaca accttcctag ttaagtgaag      240
ggcatgatga tcatccaaag cccagtggtc acttactcca gactttctgc aatgaagatc      300
a

```

&lt;210&gt; 262

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 262

```

gaggagagcc tggtacagca tttgtaagca cagaatactc caggagtatt tgtaattgtc      60
tgtgagcttc ttgccgcaag tctctcagaa atttaaaaag atgcaaatcc ctgagtcacc      120
cctagacttc ctaaaccaga tcctctgggg ctggaacctg gcactctgca tttgtaatga      180
gggctttctg gtgcacacct aattttgtgc atctttgccc taaatcctgg attagtcccc      240
catcattacc cccacattat aatgggatag attcagagca gatactctcc agcaaagaat      300
c

```

&lt;210&gt; 263

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(301)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 263

```

tttagcttgt ggtaaatgac tcacaaaact gattttaaaa tcaagttaat gtgaattttg      60
aaaattacta cttaatccta attcacaata acaatggcat taagggtttga cttgagttgg      120
ttcttagtat tatttatggt aaataggctc ttaccacttg caaataactg gccacatcat      180
taatgactga cttcccagta aggctctcta aggggtaagt angaggatcc acaggatttg      240
agatgctaag gccccagaga tcgtttgatc caaccctctt attttcagag gggaaaatgg      300
g

```

&lt;210&gt; 264

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 264

```

aaagacgtta aaccactcta ctaccacttg tggaactctc aaagggtaaa tgacaaascc      60

```

aatgaatgac	tctaaaaaca	atattttacat	ttaatgggtt	gtagacaata	aaaaaacaag	120
gtggatagat	ctagaattgt	aacattttta	gaaaaccata	scatttgaca	gatgagaaag	180
ctcaattata	gatgcaaagt	tataactaaa	ctactatagt	agtaaagaaa	tacatttcac	240
acccttcata	taaattcact	atcttggcct	gaggcactcc	ataaaatgta	tcacgtgcat	300
a						301

<210> 265  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 265						
tgcccaagtt	atgtgtaagt	gtatccgcac	ccagaggtaa	aactacactg	tcattcttgt	60
cttcttgtga	cgcagtattt	cttctctggg	gagaagccgg	gaagtcttct	cctggctcta	120
catattcttg	gaagtctcta	atcaactttt	gttccatttg	tttcatttct	tcaggaggga	180
ttttcagttt	gtcaacatgt	tctctaacaa	cacttgccca	tttctgtaaa	gaatccaaag	240
cagtccaagg	ctttgacatg	tcaacaacca	gcataactag	agtatccttc	agagatacgg	300
c						301

<210> 266  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 266						
taccgtctgc	ccttcctccc	atccaggcca	tctgcgaatc	tacatgggtc	ctcctattcg	60
acaccagatc	actctttcct	ctacccacag	gcttgctatg	agcaagagac	acaacctcct	120
ctcttctgtg	ttccagcttc	ttttcctgtt	cttcccaccc	cttaagttct	attcctgggg	180
atagagacac	caatacccat	aacctctctc	ctaagcctcc	ttataaccca	gggtgcacag	240
cacagactcc	tgacaactgg	taaggccaat	gaactgggag	ctcacagctg	gctgtgcctg	300
a						301

<210> 267  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 267						
aaagagcaca	ggccagctca	gcctgccctg	gccatctaga	ctcagcctgg	ctccatgggg	60
gttctcagtg	ctgagtccat	ccaggaaaag	ctcacctaga	ccttctgagg	ctgaatcttc	120
atccttcacg	gcagcttctg	agagcctgat	attcctagcc	ttgatggctc	ggagtaaagc	180
ctcattctga	ttcctctcct	tcttttcttt	caagttggct	ttcctcacat	ccctctgttc	240
aattcgcttc	agcttgtctg	ctttagccct	catttccaga	agcttcttct	ctttggcatc	300
t						301

<210> 268  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 268						
aatgtctcac	tcaactactt	cccagcctac	cgtggcctaa	ttctgggagt	tttcttctta	60
gatcttggga	gagctgggtc	ttctaaggag	aaggaggaag	gacagatgta	actttggatc	120
tcgaagagga	agtctaattg	aagtaattag	tcaacgggtc	ttgttttagac	tcttgggaata	180
tgctgggtgg	ctcagtgagc	ccttttggag	aaagcaagta	ttattcttaa	ggagtaacca	240
cttcccatgg	ttctactttc	taccatcatc	aattgtatat	tatgtattct	ttggagaact	300
a						301

<210> 269  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

&lt;400&gt; 269

taacaatata	cactagctat	ctttttaact	gtccatcatt	agcaccaatg	aagattcaat	60
aaaattacct	ttattcacac	atctcaaaac	aattctgcaa	attcttagtg	aagtttaact	120
atagtcacag	accttaaata	ttcacattgt	tttctatgtc	tactgaaaat	aagttcacta	180
cttttctgga	tattctttac	aaaatcttat	taaaattcct	gggtattatca	cccccaatta	240
tacagtagca	caaccacctt	atgtagtttt	tacatgatag	ctctgtagaa	gtttcacatc	300
t						301

&lt;210&gt; 270

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 270

cattgaagag	cttttgcgaa	acatcagaac	acaagtgcct	ataaaaattaa	ttaagcctta	60
cacaagaata	catattcctt	ttattttctaa	ggagttaaac	atagatgtag	ctgatgtgga	120
gagcttgctg	gtgcagtgca	tattggataa	cactattcat	ggccgaattg	atcaagtcaa	180
ccaactcctt	gaactggatc	atcagaagaa	gggtggtgca	cgatatactg	cactagataa	240
tggaccaacc	aactaaattc	tctcaccagg	ctgtatcagt	aaactggctt	aacagaaaac	300
a						301

&lt;210&gt; 271

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(301)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 271

aaaaggttct	cataagatta	acaattttaa	taaatatttg	atagaacatt	ctttctcatt	60
tttatagctc	atctttaggg	ttgatattca	gttcatgctt	cccttgctgt	tcttgatcca	120
gaattgcaat	cacttcatca	gcctgtattc	gtcccaattc	tctataaagt	gggtccaagg	180
tgaaccacag	agccacagca	cacctctttc	ccttggtgac	tgccttcacc	ccatganggt	240
tctctcctcc	agatganaac	tgatcatgcg	cccacatttt	gggttttata	gaagcagtc	300
c						301

&lt;210&gt; 272

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 272

taaattgcta	agccacagat	aacaccaatc	aaatggaaca	aatcactgtc	ttcaaagtgc	60
ttatcagaaa	accaaagtag	cctggaatct	tcataatacc	taaacatgcc	gtatttagga	120
tccaataatt	ccctcatgat	gagcaagaaa	aattctttgc	gcacccctcc	tgcattccaca	180
gcattctctc	caacaaatat	aaccttgagt	ggcttcttgt	aatctatgtt	ctttgttttc	240
ctaaggactt	ccattgcata	tctacaata	ttttctctac	gcaccactag	aattaagcag	300
g						301

&lt;210&gt; 273

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(301)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 273

acatgtgtgt	atgtgtatct	ttgggaaaan	aanaagacat	cttgtttayt	atTTTTTTgg	60
agagangctg	ggacatggat	aatcacwtaa	tttgctayta	tyactttaat	ctgactygaa	120
gaaccgtcta	aaaataaaaat	ttaccatgtc	dtatatccct	tatagtatgc	ttatttcacc	180
ttytttctgt	ccagagagag	tatcagtgac	ananatttma	gggtgaamac	atgmattggt	240
gggacttnty	tttacngagm	accctgcccc	sgcgccctcg	makcngantt	ccgcsananc	300
t						301

&lt;210&gt; 274

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(301)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 274

cttatatact	ctttctcaga	ggcaaaagag	gagatgggta	atgtagacaa	ttctttgagg	60
aacagtaaat	gattattaga	gagaangaat	ggaccaagga	gacagaaatt	aacttgtaaa	120
tgattctctt	tggaatctga	atgagatcaa	gaggccagct	ttagcttggtg	gaaaagtcca	180
tctaggtatg	gttgcatctt	cgtcttcttt	tctgcagtag	ataatgaggt	aaccgaaggc	240
aattgtgctt	cttttgataa	gaagctttct	tggtcatatc	aggaaattcc	aganaaaagtc	300
c						301

&lt;210&gt; 275

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(301)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 275

tcgggtgtcag	cagcacgtgg	cattgaacat	tgcaatgtgg	agcccaaacc	acagaaaatg	60
gggtgaaatt	ggccaacttt	ctattaactt	atggtggcaa	ttttgccacc	aacagtaagc	120
tggtcccttct	aataaaaagaa	aattgaaagg	tttctcacta	aacggaatta	agtagtggag	180
tcaagagact	cccaggcctc	agcgtacctg	cccgggcggc	cgctcgaagc	cgaattctgc	240
agatatccat	cacactggcg	gncgctcgan	catgcatcta	gaaggnccaa	ttcgccctat	300
a						301

&lt;210&gt; 276

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 276

tgtacacata	ctcaataaat	aatgactgc	attgtggat	tattactata	ctgattatat	60
ttatcatgtg	acttctaatt	agaaaatgta	tccaaaagca	aaacagcaga	tatacaaaat	120
taaagagaca	gaagatagac	attaacagat	aaggcaactt	atacattgag	aatccaaatc	180
caatacattt	aaacatttgg	gaaatgaggg	ggacaaatgg	aagccagatc	aaatttgtgt	240
aaaactattc	agtatgtttc	ccttgcttca	tgtctgagaa	ggctctcctt	caatggggat	300
g						301

&lt;210&gt; 277

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(301)  
 <223> n = A,T,C or G

<400> 277  
 tttgttgatg tcagtatttt attacttgcg ttatgagtgc tcacctggga aattctaaag 60  
 atacagagga cttggaggaa gcagagcaac tgaatttaat ttaaaagaag gaaaacattg 120  
 gaatcatggc actcctgata ctttcccaaa tcaacactct caatgccccca ccctcgtcct 180  
 caccatagtg gggagactaa agtggccacg gatttgcctt anggtgtgcag tgcgttctga 240  
 gttcncctgc gattacatct gaccagtctc ctttttccga agtcctntccg ttcaatcttg 300  
 c 301

<210> 278  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(301)  
 <223> n = A,T,C or G

<400> 278  
 taccactaca ctccagcctg ggcaacagag caagacctgt ctcaaagcat aaaatggaat 60  
 aacatatcaa atgaaacagg gaaaatgaag ctgacaattt atggaagcca gggcttgatca 120  
 cagtctctac tggtattatg cattacctgg gaatttatat aagcccttaa taataatgcc 180  
 aatgaacatc tcatgtgtgc tcacaatgtt ctggcactat tataagtgtc tcacagggtt 240  
 tatgtgttct tcgtaacttt atggantagg tactcggccg cgaacacgct aagccgaatt 300  
 c 301

<210> 279  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(301)  
 <223> n = A,T,C or G

<400> 279  
 aaagcaggaa tgacaaagct tgcttttctg gtatgttcta ggtgtattgt gacttttact 60  
 gttatattaa ttgccaatat aagtaaatat agattatata tgtatagtgt ttcacaaagc 120  
 ttagaccttt accttccagc caccacacag tgcttgatat ttcagagtca gtcattgggt 180  
 atacatgtgt agttccaaag cacataagct agaanaanaa atatttctag ggagcactac 240  
 catctgtttt cacatgaaat gccacacaca tagaactcca acatcaattt cattgcacag 300  
 a 301

<210> 280  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 280  
 ggtactggag ttttctccc ctgtgaaaac gtaactactg ttgggagtga attgaggatg 60  
 tagaaaggtg gtggaaccaa attgtggtca atggaaatag gagaatatgg ttctcactct 120  
 tgagaaaaaa acctaaagatt agcccaggta gttgcctgta acttcagttt ttctgcctgg 180  
 gtttgatata gtttaggggtt ggggttagat taagatctaa attacatcag gacaaagaga 240  
 cagactatta actccacagt taattaagga ggtatgttcc atgtttattt gttaaagcag 300  
 t 301

<210> 281  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 281  
 aggtacaaga aggggaatgg gaaagagctg ctgctgtggc attgttcaac ttggatattc 60  
 gccgagcaat ccaaatcctg aatgaagggg catcttctga aaaaggagat ctgaatctca 120  
 atgtggtagc aatggcttta tcgggttata cggatgagaa gaactccctt tggagagaaa 180  
 tgtgtagcac actgcgatta cagctaaata acccgattt gtgtgtcatg tttgcatttc 240  
 tgacaagtga aacaggatct tacgatggag ttttgtatga aaacaaagt gacgtacctc 300  
 g 301

<210> 282  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 282  
 caggtactac agaattaaaa tactgacaag caagtagttt cttggcgtgc acgaattgca 60  
 tccagaaccc aaaaattaag aaattcaaaa agacattttg tgggcacctg ctgacacaga 120  
 agcgacagaag caaagcccag gcagaacctat gctaaccctta cagctcagcc tgcacagaag 180  
 cgcagaagca aagcccaggc agaaccatgc taaccttaca gctcagcctg cacagaagcg 240  
 cagaagcaaa gccccaggcag aacatgctaa ccttacagct cagcctgcac agaagcacag 300  
 a 301

<210> 283  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 283  
 atctgtatac ggcagacaaa ctttatarag tgtagagagg tgagcgaaag gatgcaaaag 60  
 cactttgagg gctttataat aatatgctgc ttgaaaaaaa aaatgtgtag ttgatactca 120  
 gtgcattccc agacatagta aggggttgct ctgaccaatc aggtgatcat tttttctatc 180  
 acttcccagg ttttatgcaa aaattttgtt aaattctata atggtgatat gcattcttta 240  
 ggaaacatat acatttttaa aaatctattt tatgtaagaa ctgacagacg aatttgcttt 300  
 g 301

<210> 284  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 284  
 caggtacaaa acgctattaa gtggcttaga atttgaacat ttgtggtctt tatttacttt 60  
 gcttcgtgtg tgggcaaagc aacatcttcc cttaaataat attaccaaga aaagcaagaa 120  
 gcagattagg tttttgacaa aacaaacagg ccaaaagggg gctgacctgg agcagagcat 180  
 ggtgagaggc aaggcatgag agggcaagtt tggtgtggac agatctgtgc ctactttatt 240  
 actggagtaa aagaaaacaa agttcattga tgtcgaagga tatatacagt gttagaatt 300  
 a 301

<210> 285  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(301)  
 <223> n = A,T,C or G



<400> 285  
 acatcaccat gatcggatcc cccacccatt atacgttgta tgtttacata aatactcttc 60  
 aatgatcatt agtgttttaa aaaaaatact gaaaactcct tctgcatccc aatctctaac 120  
 caggaaagca aatgctatct acagacctgc aagccctccc tcaaacnaaa ctatttctgg 180  
 attaaatatg tctgacttct tttgaggta cagcactagg caaatgctat ttacgatctg 240  
 caaaagctgt ttgaagagtc aaagccccc tgtgaacacg atttctggac cctgtaacag 300  
 t 301

<210> 286  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 286  
 taccactgca ttccagcctg ggtgacagag tgagactccg tctccaaaaa aaactttgct 60  
 tgtatattat ttttgcccta cagtggatca ttctagtagg aaaggacagt aagatttttt 120  
 atcaaaatgt gtcatgccag taagagatgt tatattcttt tctcatttct tccccacca 180  
 aaaataagct accatatagc ttataagtct caaatttttg ctttttacta aaatgtgatt 240  
 gtttctgttc attgtgtatg cttcatcacc tatattaggc aaattccatt ttttcccttg 300  
 t 301

<210> 287  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 287  
 tacagatctg ggaactaaat attaaaaatg agtgtggctg gatatatgga gaatgttggg 60  
 cccagaagga acgtagagat cagatattac aacagctttg ttttgagggt tagaaatatg 120  
 aaatgatttg gttatgaacg cacagttagg gcagcagggc cagaatcctg accctctgcc 180  
 ccgtgggtat ctctctccca gcttggctgc ctcatgttat cacagtattc cattttggtt 240  
 gttgcatgtc ttgtgaagcc atcaagattt tctcgtctgt tttcctctca ttggtaatgc 300  
 t 301

<210> 288  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 288  
 gtacacctaa ctgcaaggac agctgaggaa tgtaatgggc agccgctttt aaagaagtag 60  
 agtcaatagg aagacaaatt ccagttccag ctcatctggg gtatctgcaa agctgcaaaa 120  
 gatctttaa gacaatttca agagaatatt tccttaaagt tggcaatttg gagatcatac 180  
 aaaagcatct gcttttgtga ttttaatttag ctcatctggc cactggaaga atccaaacag 240  
 tctgccttaa ttttgatga atgcatgatg gaaattcaat aatttagaaa gttaaaaaaa 300  
 a 301

<210> 289  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(301)  
 <223> n = A,T,C or G

<400> 289  
 ggtacactgt ttccatgta tgtttctaca cattgctacc tcagtgtctc tggaaactta 60  
 gcttttgatg tctccaagta gtccaccttc atttaactct ttgaaactgt atcatcttg 120  
 ccaagtaaga gtggtggcct atttcagctg ctttgacaaa atgactggct cctgacttaa 180

cgttctataa atgaatgtgc tgaagcaaag tgcccatggt ggcggcgaan aagagaaaaga 240  
 tgtgttttgt tttggactct ctgtggtccc ttccaatgct gtgggtttcc aaccagnnga 300  
 a 301

<210> 290  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(301)  
 <223> n = A,T,C or G

<400> 290  
 acactgagct cttcttgata aatatacaga atgcttggca tatacaagat tctatactac 60  
 tgactgatct gttcatttct ctcacagctc ttacccccaa aagcttttcc accctaagt 120  
 ttctgacctc cttttctaata cacagtaggg atagaggcag anccacctac aatgaacatg 180  
 gagttctatc aagaggcaga aacagcacag aatcccagtt ttaccattcg ctgacagtgc 240  
 tgccttgaac aaaaacattt ctccatgtct ctttttcttc atgcctcaag taacagtga 300  
 a 301

<210> 291  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 291  
 caggtacca tttcttctat cctagaaaca tttcatttta tgttgttgaa acataacaac 60  
 tatatcagct agattttttt tctatgcttt acctgctatg gaaaatttga cacattctgc 120  
 tttactcttt tgtttatagg tgaatcacaa aatgtatttt tatgtattct gtagttcaat 180  
 agccatggct gtttacttca ttttaatttt ttagcataaa gacattatga aaaggcctaa 240  
 acatgagctt cacttcccc ctaactaatt agcatctggt atttcttaac cgtaatgcct 300  
 a 301

<210> 292  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(301)  
 <223> n = A,T,C or G

<400> 292  
 accttttagt agtaatgtct aataataaat aagaaatcaa ttttataagg tccatatagc 60  
 tgtattaaat aatttttaag tttaaaagat aaaataccat catttttaaat gttggtattc 120  
 aaaaccaaag natataaccg aaaggaaaaa cagatgagac ataaaatgat ttgcnagatg 180  
 ggaaatatag tasttyatga atgttnatta aattccagtt ataatagtgg ctacacactc 240  
 tcactacaca cacagacccc acagtcctat atgccacaaa cacatttcca taacttgaaa 300  
 a 301

<210> 293  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 293  
 ggtaccaagt gctggtgccg gcctgttacc tgttctcact gaaaagtctg gctaagtctc 60  
 ttgtgtagtc acttctgatt ctgacaatca atcaatcaat ggcctagagc actgactgtt 120  
 aacacaaaacg tcactagcaa agtagcaaca gctttaagtc taaatacaaa gctgttctgt 180

gtgagaattt tttaaaaggc tacttgtata ataacccttg tcatttttaa tgtacctcgg 240  
 ccgcgaccac gctaagccga attctgcaga tatccatcac actggcggcc gctcgagcat 300  
 g 301

<210> 294  
 <211> 301  
 <212> DNA  
 <213> Homo sapien  
 <220>  
 <221> misc\_feature  
 <222> (1)...(301)  
 <223> n = A,T,C or G

<400> 294  
 tgaccataa caatatacac tagctatctt tttactgtc catcattagc accaatgaag 60  
 attcaataaa attaccttta ttcacacatc tcaaaaacaat tctgcaaatt cttagtgaag 120  
 tttactata gtcacaganc ttaaattatc acattgtttt ctatgtctac tgaaaataag 180  
 ttcactactt ttctgggata ttctttacaa aatcttatta aaattcctgg tattatcacc 240  
 cccaattata cagtagcaca accaccttat gtagttttta catgatagct ctgtagaggt 300  
 t 301

<210> 295  
 <211> 305  
 <212> DNA  
 <213> Homo sapien

<400> 295  
 gtactctttt tctccctcc tctgaattta attctttcaa cttgcaattt gcaaggatta 60  
 cacatttcac tgtgatgtat attgtgttgc aaaaaaaaaa gtgtctttgt ttaaaattac 120  
 ttggtttgtg aatccatctt gctttttccc cattgggaact agtcattaac ccatctctga 180  
 actggtagaa aaacrtctga agagctagtc tatcagcatc tgacagggtga attggatggt 240  
 ttcagaacc atttcaccca gacagcctgt ttctatcctg ttttaataaat tagtttgggt 300  
 tctct 305

<210> 296  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 296  
 aggtactatg ggaagctgct aaaataatat ttgatagtaa aagtatgtaa tgtgctatct 60  
 cacctagtag taaactaaaa ataaactgaa actttatgga atctgaagtt attttccttg 120  
 attaaataga attaataaac caatatgagg aaacatgaaa ccatgcaatc tactatcaac 180  
 tttgaaaaag tgattgaacg aaccacttag ctttcagatg atgaacactg ataagtcatt 240  
 tgtcattact ataaatttta aaatctgtta ataagatggc ctatagggag gaaaaagggg 300  
 c 301

<210> 297  
 <211> 300  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(300)  
 <223> n = A,T,C or G

<400> 297  
 actgagtttt aactggacgc caagcaggca aggctggaag gttttgctct ctttgtgcta 60  
 aaggttttga aaaccttgaa ggagaatcat ttgacaaga agtacttaag agtctagaga 120  
 acaaagangt gaaccagctg aaagctctcg ggggaanctt acatgtgttg ttaggcctgt 180

tccatcattg	ggagtgcact	ggccatccct	caaaatttgt	ctgggctggc	ctgagtggtc	240
accgcacctc	ggccgcgacc	acgctaagcc	gaattctgca	gatatccatc	acactggcgg	300

<210> 298  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(301)  
 <223> n = A,T,C or G

<400> 298						
tatgggggttt	gtcacccaaa	agctgatgct	gagaaaggcc	tccctggggc	ccctcccgcg	60
ggcatctgag	agacctggtg	ttccagtgtt	tctggaaatg	ggtcccagtg	ccgccggctg	120
tgaagctctc	agatcaatca	cgggaagggc	ctggcggtgg	tggccacctg	gaaccaccct	180
gtcctgtctg	tttacatttc	actaycaggt	tttctctggg	cattacnatt	tgttccccta	240
caacagtgc	ctgtgcattc	tgctgtggcc	tgctgtgtct	gcaggtggct	ctcagcgagg	300
t						301

<210> 299  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 299						
gttttgagac	ggagtttcac	tcttgttgcc	cagactggac	tgcaatggca	gggtctctgc	60
tcactgcacc	ctctgcctcc	caggttcgag	caattctcct	gcctcagcct	cccaggtagc	120
tgggattgca	ggctcacgcc	accataccca	gctaattttt	ttgtattttt	agtagagacg	180
gagtttcgcc	atggttgcca	gctggtctca	aaactcctgac	ctcaagcgac	ctgcctgcct	240
cggcctccca	aagtgctgga	attataggca	tgagtcaaca	cgcccagcct	aaagatattt	300
t						301

<210> 300  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 300						
attcagtttt	atttgctgcc	ccagtatctg	taaccaggag	tgccacaaaa	tcttgccaga	60
tatgtccac	accactggg	aaaggctccc	acctggctac	ttcctctatc	agctgggtca	120
gctgcattcc	acaaggttct	cagcctaatt	agtttcta	cctgccagtc	tcaaaactta	180
gtaaagcaag	accatgacat	tccccacgg	aaatcagagt	ttgccccacc	gtcttgttac	240
tataaagcct	gcctctaaca	gtccttgctt	cttcacacca	atcccagagc	catcccccat	300
g						301

<210> 301  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 301						
ttaaattttt	gagaggataa	aaaggacaaa	taatctagaa	atgtgtcttc	ttcagtctgc	60
agaggacccc	aggtctccaa	gcaaccacat	ggtcaagggc	atgaataatt	aaaagtgtgt	120
gggaactcac	aaagaccctc	agagctgaga	caccacaaac	agtgggagct	cacaaagacc	180
ctcagagctg	agacaccac	aacagtggga	gtcacaaaag	accctcagag	ctgagacacc	240
cacaacagca	cctcgttcag	ctgccacatg	tgtgaataag	gatgcaatgt	ccagaagtgt	300
t						301

<210> 302  
 <211> 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 302

```

aggtacacat ttagcttgtg gtaaagtact cacaaaaactg attttaaaat caagttaatg      60
tgaatttttg aaattactac ttaatcctaa ttcacaataa caatggcatt aagggttgac      120
ttgagttggg tcttagtatt atttatggta aataggctct taccacttgc aaataactgg      180
ccacatcatt aatgactgac ttcccagtaa ggctctctaa ggggtaagta ggaggatcca      240
caggatttga gatgctaagg ccccagagat cgtttgatcc aaccctctta ttttcagagg      300
g                                                                                   301

```

&lt;210&gt; 303

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 303

```

aggtaccaac tgtggaaata ggtagaggat cattttttct ttccatatca actaagttgt      60
atattgtttt ttgacagttt aacacatctt cttctgtcag agattctttc acaatagcac      120
tggctaattg aactaccgct tgcattgtta aaatgggtgt ttgtgaaatg atcataggcc      180
agtaacgggt atgtttttct aactgatctt ttgctcgttc caaagggacc tcaagacttc      240
catcgatttt atatctgggg tctagaaaag gagttaatct gttttccctc ataaattcac      300
c                                                                                   301

```

&lt;210&gt; 304

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 304

```

acatggatgt tattttgcag actgtcaacc tgaatttgta tttgottgac attgcctaatt      60
tattagtttc agtttcagct tacccacttt ttgtctgcaa catgcaraas agacagtgcc      120
cttttttagtg tatcatatca ggaatcatct cacattgggt ttgtgccatta ctgggtgcagt      180
gactttcagc cacttgggta aggtggagtt ggccatatgt ctccactgca aaattactga      240
ttttcctttt gtaattaata agtgtgtgtg tgaagattct ttgagatgag gtatatatct      300
c                                                                                   301

```

&lt;210&gt; 305

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(301)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 305

```

gangtacagc gtgggtcaagg taacaagaag aaaaaaatgt gagtggcatc ctgggatgag      60
cagggggaca gacctggaca gacacgttgt catttgctgc tgtgggtagg aaaatgggag      120
taaaggagga gaaacagata caaatctccc aactcagtat taaggatttc tcatgcctag      180
aatattggta gaaacaagaa tacattcata tggcaaataa ctaaccatgg tggaacaaaa      240
ttctgggatt taagttggat accaangaaa ttgtattaaa agagctgttc atggaataag      300
a                                                                                   301

```

&lt;210&gt; 306

&lt;211&gt; 8

&lt;212&gt; PRT

&lt;213&gt; Homo sapien

&lt;400&gt; 306

Val Leu Gly Trp Val Ala Glu Leu

1

5

<210> 307  
 <211> 637  
 <212> DNA  
 <213> Homo sapien

&lt;400&gt; 307

acagggratg	aagggaag	gagaggatga	ggaagcccc	ctggggattt	ggtttggtcc	60
ttgtgatcag	gtgggtctatg	gggcttatcc	ctacaaagaa	gaatccagaa	ataggggcac	120
attgaggaat	gatacttgag	cccaaagagc	attcaatcat	tgttttat	gccttm	180
cacaccattg	gtgagggagg	gattaccacc	ctgggggttat	gaagatgggt	gaacaccca	240
cacatagcac	cggagatatg	agatcaacag	tttcttagcc	atagagattc	acagcccaga	300
gcaggaggac	gcttgacac	catgcaggat	gacatggggg	atgcgctcgg	gattgggtg	360
aagaagcaag	gactgttaga	ggcaggcttt	atagtaacaa	gacggtgggg	caaactctga	420
tttccgtggg	ggaatgtcat	ggtcttgctt	tactaagttt	tgagactggc	aggtagtga	480
actcattagg	ctgagaacct	tgtggaatgc	acttgaccca	sctgatagag	gaagtagcca	540
ggtgggagcc	tttcccagtg	ggtgtgggac	atatctggca	agattttgtg	gcactcctgg	600
ttacagatac	tggggcagca	aataaaactg	aatcttg			637

<210> 308  
 <211> 647  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(647)  
 <223> n = A,T,C or G

&lt;400&gt; 308

acgattttca	ttatcatgta	aatcgggtca	ctcaaggggc	caaccacagc	tgggagccac	60
tgctcagggg	aaggttcata	tgggactttc	tactgcccaa	ggttctatac	aggatataaa	120
ggngcctcac	agtagatgc	tggtagcaaa	gaagaagaaa	caaacactga	tctctttctg	180
ccaccctct	gaccctttg	aactcctctg	accctttaga	acaagcctac	ctaatactg	240
ctagagaaaa	gaccaacaac	ggcctcaaag	gatctcttac	catgaaggtc	tcagctaatt	300
cttgggctaag	atgtgggttc	cacattaggt	tctgaatatg	gggggaaggg	tcaatttgct	360
cattttgtgt	gtggataaag	tcaggatgcc	cagggggccag	agcagggggc	tgcttgcttt	420
gggaacaatg	gctgagcata	taaccatagg	ttatggggaa	caaaacaaca	tcaaagtcac	480
tgtatcaatt	gccatgaaga	cttgagggac	ctgaatctac	cgattcatct	taaggcagca	540
ggaccagttt	gagtggcaac	aatgcagcag	cagaatcaat	ggaaacaaca	gaatgattgc	600
aatgtccttt	tttttctcct	gcttctgact	tgataaaagg	ggaccgt		647

<210> 309  
 <211> 460  
 <212> DNA  
 <213> Homo sapien

&lt;400&gt; 309

actttatagt	ttaggctgga	cattggaaaa	aaaaaaaagc	cagaacaaca	tgtgatagat	60
aatatgattg	gctgcacact	tccagactga	tgaatgatga	acgtgatgga	ctattgtatg	120
gagcacatct	tcagcaagag	ggggaaatac	tcattctttt	tggccagcag	ttgtttgatc	180
accaaaccatc	atgccagaat	actcagcaaa	ccttcttagc	tcttgagaag	tcaaagtccg	240
ggggaattta	ttcctggcaa	ttttaattgg	actccttatg	tgagagcagc	ggctacccag	300
ctgggggtggt	ggagcgaacc	cgtcactagt	ggacatgcag	tggcagagct	cctggttaacc	360
acctagagga	atacacaggc	acatgtgtga	tgccaagcgt	gacacctgta	gcactcaaat	420
ttgtcttgtt	tttgtctttc	ggtgtgtaag	attcttaagt			460

<210> 310  
 <211> 539  
 <212> DNA  
 <213> Homo sapien

```

<400> 310
acgggactta tcaaataaag ataggaaaag aagaaaactc aaatattata ggcagaaatg      60
ctaaagggtt taaaatatgt caggattgga agaaggcatg gataaagaac aaagttcagt      120
taggaaagag aaacacagaa ggaagagaca caataaaagt cattatgtat tctgtgagaa      180
gtcagacagt aagatttgtg ggaaatgggt tggtttgttg tatggtagat atttttagcaa      240
taatctttat ggcagagaaa gctaaaatcc tttagcttgc gtgaatgatc acttgctgaa      300
ttcctcaagg taggcatgat gaaggagggt ttagaggaga cacagacaca atgaactgac      360
ctagatagaa agccttagta tactcagcta ggaatagtga ttctgagggc acactgtgac      420
atgattatgt cattacatgt atggtagtga tggggatgat aggaaggaag aacttatggc      480
atattttcac cccacaaaaa gtcagttaaa tattgggaca ctaaccatcc aggtcaaga      539

```

```

<210> 311
<211> 526
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(526)
<223> n = A,T,C or G

```

```

<400> 311
caaatttgag ccaatgacat agaattttac aaatcaagaa gcttattctg gggccatttc      60
ttttgacggt ttctctaaac tactaaagag gcattaatga tccataaatt atattatcta      120
catttacagc atttaaaatg tggtcagcat gaaatattag ctacagggga agctaaataa      180
attaacatg gaataaagat ttgtccttaa atataatcta caagaagact ttgatatttg      240
tttttcacaa gtgaagcatt cttataaagt gtcataacct ttttggggaa actatgggaa      300
aaaatgggga aactctgaag ggttttaagt atcttacctg aagctacaga ctccataacc      360
tctctttaca gggagctcct gcagccccta cagaaatgag tggctgagat tcttgattgc      420
acagcaagag cttctcatct aaacccttcc cctttttagt atctgtgtat caagtataaa      480
agttctataa actgtagtnt acttatttta atccccaaga cacagt      526

```

```

<210> 312
<211> 500
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(500)
<223> n = A,T,C or G

```

```

<400> 312
cctctctctc cccacccctt gactctagag aactgggttt tctcccagta ctccagcaat      60
tcatttctga aagcagttga gccactttat tccaaagtac actgcagatg ttcaaactct      120
ccatttctct ttcccttcca cctgccagtt ttgctgactc tcaacttgtc atgagtgtaa      180
gcattaagga cattatgctt cttcgattct gaagacaggc cctgctcatg gatgactctg      240
gcttcttagg aaaatatttt tcttccaaaa tcagtaggaa atctaaactt atccccctctt      300
tgcagatgtc tagcagcttc agacatttgg ttaagaacct atgggaaaaa aaaaaatcct      360
tgctaattgt gtttcccttg taaaccanga ttcttatttg nctggtagat aatatcagct      420
ctgaacgtgt ggtaaagatt tttgtgtttg aatataggag aaatcagttt gctgaaaagt      480
tagtcttaat tatctattgg      500

```

```

<210> 313
<211> 718
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(718)

```

<223> n = A,T,C or G

<400> 313

ggagatttgt	gtggtttgca	gccgagggag	accaggaaga	tctgcatggt	gggaaggacc	60
tgatgataca	gaggtgagaa	ataagaaagg	ctgctgactt	taccatctga	ggccacacat	120
ctgctgaaat	ggagataatt	aacatcacta	gaaacagcaa	gatgacaata	taatgtctaa	180
gtagtacat	gtttttgcac	atttccagcc	cttttaaata	tccacacaca	caggaagcac	240
aaaaggaagc	acagagatcc	ctgggagaaa	tgcccggccg	ccatcttggg	tcacgatga	300
gcctcgccct	gtgcctgntc	ccgcttgtga	gggaaggaca	ttagaaaatg	aattgatgtg	360
ttccttaaag	gatggcagga	aaacagatcc	tggtgtggat	atttatttga	acgggattac	420
agatttgaaa	tgaagtcaca	aagtgagcat	taccaatgag	aggaaaacag	acgagaaaat	480
cttgatgggt	cacaagacat	gcaacaaaca	aaatggaata	ctgtgatgac	acgagcagcc	540
aactggggag	gagataccac	ggggcagagg	tcaggattct	ggccctgctg	cctaactgtg	600
cgttatacca	atcatttcta	tttctaccct	caaacaagct	gtngaatatc	tgacttacgg	660
ttcttntggc	ccacattttc	atnatccacc	ccntcntttt	aannttantic	caaantgt	718

<210> 314

<211> 358

<212> DNA

<213> Homo sapien

<400> 314

gtttattttac	attacagaaa	aaacatcaag	acaatgtata	ctattttcaaa	tatatccata	60
cataatcaaaa	tatagctgta	gtacatgttt	tcattgggtg	agattaccac	aatgcaagg	120
caacatgtgt	agatctcttg	tcttattctt	ttgtctataa	tactgtattg	tgtagtccaa	180
gctctcggtg	gtccagccac	tgtgaaacat	gtccctttta	gattaacctc	gtggacgctc	240
ttgttgatt	gctgaactgt	agtgcctgt	atthtgcctc	tgtctgtgaa	ttctgttgct	300
tctggggcat	ttccttggtg	tgcagaggac	caccacacag	atgacagcaa	tctgaatt	358

<210> 315

<211> 341

<212> DNA

<213> Homo sapien

<400> 315

taccacctcc	ccgctggcac	tgatgagccg	catcaccatg	gtcaccagca	ccatgaaggc	60
ataggtgatg	atgaggacat	ggaatgggcc	cccaaggatg	gtctgtccaa	agaagcgagt	120
gacccccatt	ctgaagatgt	ctggaacctc	taccagcagg	atgatgatag	ccccaatgac	180
agtcaccagc	tccccgacca	gccggatatc	gtccttaggg	gtcatgtagg	cttctgaag	240
tagcttctgc	tgtaagaggg	tggtgtcccg	ggggctcgtg	cggttattgg	tcctgggctt	300
gagggggcgg	tagatgcagc	acatggtgaa	gcagatgatg	t		341

<210> 316

<211> 151

<212> DNA

<213> Homo sapien

<400> 316

agactgggca	agactcttac	gccccacact	gcaatttgggt	cttggtgccc	tatccattta	60
tgtgggcctt	tctcgagttt	ctgattataa	acaccactgg	agcgatgtgt	tgactggact	120
cattcaggga	gctctgggtg	caatattagt	t			151

<210> 317

<211> 151

<212> DNA

<213> Homo sapien

<400> 317

agaactagtg	gacctaagt	aaatacctga	aacatatatt	ggcatttatc	aatggctcaa	60
atcttcattt	atctctggcc	ttaaccctgg	ctcctgaggc	tgccggccagc	agatcccagg	120
ccagggctct	gttcttgcca	cacctgcttg	a			151



<210> 318  
<211> 151  
<212> DNA  
<213> Homo sapien

<400> 318  
actggtggga ggcgctgttt agttggctgt tttcagaggg gtcttttcgga gggacctcct 60  
gctgcaggct ggagtgctctt tattcctggc gggagaccgc acattccact gctgaggctg 120  
tgggggcggg ttatcaggca gtgataaaca t 151

<210> 319  
<211> 151  
<212> DNA  
<213> Homo sapien

<400> 319  
aactagtggga tccagagcta taggtacagt gtgatctcag ctttgcaaac acattttcta 60  
catagatagt actaggtatt aatagatatg taaagaaaga aatcacacca ttaataatgg 120  
taagattggg tttatgtgat tttagtggg a 151

<210> 320  
<211> 150  
<212> DNA  
<213> Homo sapien

<400> 320  
aactagtggga tccactagtc cagtgtgggt gaattccatt gtgttggggg tctagatcgc 60  
gagcggctgc cttttttttt tttttttttg ggggggaatt tttttttttt aatagttatt 120  
gagtgttcta cagcttacag taaataccat 150

<210> 321  
<211> 151  
<212> DNA  
<213> Homo sapien

<400> 321  
agcaactttg tttttcatcc aggttatattt aggcttagga tttcctctca cactgcagtt 60  
tagggtgga ttgtaaccag ctatggcata ggtgttaacc aaaggctgag taaacatggg 120  
tgcctctgag aaatcaaagt cttcatacac t 151

<210> 322  
<211> 151  
<212> DNA  
<213> Homo sapien

<220>  
<221> misc\_feature  
<222> (1)...(151)  
<223> n = A,T,C or G

<400> 322  
atccagcacc ttctcctgtt tcttgccctc cttttttctt ttcttasatt ctgcttgagg 60  
tttgggcttg gtcagtttgc cacagggtt ggagatgggt acagtcttct ggcattcggc 120  
attgtgcagg gctcgcttca nacttcagt t 151

<210> 323  
<211> 151  
<212> DNA  
<213> Homo sapien

<220>  
<221> misc\_feature

&lt;222&gt; (1)...(151)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 323

tgaggacttg tktttttttt ctttattttt aatcctctta ckttgtaa	60
nagactcant tactaccag tttgtggtt twtgggagaa atgtaactgg acagttagct	120
gttcaatyaa aaagacactt ancccatgtg g	151

&lt;210&gt; 324

&lt;211&gt; 461

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc feature

&lt;222&gt; (1)...(461)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 324

acctgtgtgg aatttcagct ttcctcatgc aaaaggattt tgtatccccg gcctacttga	60
agaagtggtc agctaaagga atccagggtg ttggttggtgac tgtaataacc tttgatgaaa	120
agagttacta cgaatcccat cttgggttcca gctatatcac tgacagcatg gtagaagact	180
gcgaacctca cttctagact ttcacgggtg gacgaaacgg gttcagaaac tgccaggggc	240
ctcatacagg gatatacaaaa taccctttgt gctaccagg cctgggggaa tcaggtgact	300
cacacaaatg caatagtgtg tcaactgcatt tttacctgaa ccaaagctaa acccggtgtt	360
gccaccatgc accatggcat gccagagttc aacactgttg ctcttgaaaa ttgggtctga	420
aaaaacgcac aagagcccct gccctgccct agctgangca c	461

&lt;210&gt; 325

&lt;211&gt; 400

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 325

acactgtttc catgttatgt ttctacacat tgctacctca gtgctcctgg aaacttagct	60
tttgatgtct ccaagtagtc caccttcatt taactctttg aaactgtatc atctttgcc	120
agtaagagtg gtggcctatt tcagctgctt tgacaaaatg actggctcct gacttaacgt	180
tctataaatg aatgtgctga agcaaagtgc ccatgggtggc ggcgaaagaag agaaagatgt	240
gtttttttt ggactctctg tggctccttc caatgctgtg gggtttccaac caggggaagg	300
gtccctttt cattgccaaag tgccataacc atgagcacta cgctaccatg gttctgcctc	360
ctggccaagc aggtgtgttt gcaagaatga aatgaatgat	400

&lt;210&gt; 326

&lt;211&gt; 1215

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 326

ggaggactgc agcccgact cgcagccctg gcaggcggca ctggtcatgg aaaacgaatt	60
gttctgctcg ggcgtcctgg tgcattccgca gtgggtgctg tcagccgcac actgtttcca	120
gaactcctac accatcgggc tgggcctgca cagtcttgag gccgaccaag agccaggag	180
ccagatgggtg gaggccagcc tctccgtacg gcacccagag tacaacagac ccttgctcgc	240
taacgacctc atgctcatca agttggacga atccgtgtcc gagtctgaca ccatccggag	300
catcagcatt gcttcgcagt gccctaccgc ggggaactct tgcctcgttt ctggctgggg	360
tctgtctggcg aacggcagaa tgcctaccgt gctgcagtgc gtgaacgtgt cgggtgtgtc	420
tgaggaggtc tgcagtaagc tctatgacc cggtgactct cccagcatgt tctgcgccgg	480
cggaggggcaa gaccagaagg actcctgcaa ggggggcccc tgatctgcaa	540
cgggtacttg cagggccttg tgtctttcgg aaaagccccg tgtggccaag ttggcgtgcc	600
aggtgtctac accaacctct gcaaattcac tgagtggata gagaaaaccg tccaggccag	660
ttaactctgg ggactgggaa cccatgaaat tgacccccaa atacatcctg cggaaggaat	720
tcaggaatat ctgttcccag cccctcctcc ctcaggccca ggagtccagg cccccagccc	780
ctcctccctc aaaccaaggg tacagatccc cagcccctcc tccctcagac ccaggagtcc	840

```

agacccccca gcccctcctc cctcagaccc aggagtccag cccctcctcc ctcagaccca 900
ggagtccaga cccccagcc cctcctccct cagaccaggg ggtccaggcc cccaaccct 960
cctcctcag actcagaggt ccaagcccc aaccctcct tccccagacc cagaggtcca 1020
ggtcccagcc cctcctccct cagaccagc ggtccaatgc cacctagact ctccctgtac 1080
acagtgcgcc cttgtggcac gttgacccaa ccttaccagt tggtttttca tttttgtcc 1140
ctttcccta gatccagaaa taaagtctaa gagaagcgca aaaaaaaaaa aaaaaaaaaa 1200
aaaaaaaaa aaaaa 1215

```

<210> 327  
 <211> 220  
 <212> PRT  
 <213> Homo sapien

```

<400> 327
Glu Asp Cys Ser Pro His Ser Gln Pro Trp Gln Ala Ala Leu Val Met
1      5      10      15
Glu Asn Glu Leu Phe Cys Ser Gly Val Leu Val His Pro Gln Trp Val
20     25     30
Leu Ser Ala Ala His Cys Phe Gln Asn Ser Tyr Thr Ile Gly Leu Gly
35     40     45
Leu His Ser Leu Glu Ala Asp Gln Glu Pro Gly Ser Gln Met Val Glu
50     55     60
Ala Ser Leu Ser Val Arg His Pro Glu Tyr Asn Arg Pro Leu Leu Ala
65     70     75     80
Asn Asp Leu Met Leu Ile Lys Leu Asp Glu Ser Val Ser Glu Ser Asp
85     90     95
Thr Ile Arg Ser Ile Ser Ile Ala Ser Gln Cys Pro Thr Ala Gly Asn
100    105    110
Ser Cys Leu Val Ser Gly Trp Gly Leu Leu Ala Asn Gly Arg Met Pro
115    120    125
Thr Val Leu Gln Cys Val Asn Val Ser Val Val Ser Glu Glu Val Cys
130    135    140
Ser Lys Leu Tyr Asp Pro Leu Tyr His Pro Ser Met Phe Cys Ala Gly
145    150    155    160
Gly Gly Gln Asp Gln Lys Asp Ser Cys Asn Gly Asp Ser Gly Gly Pro
165    170    175
Leu Ile Cys Asn Gly Tyr Leu Gln Gly Leu Val Ser Phe Gly Lys Ala
180    185    190
Pro Cys Gly Gln Val Gly Val Pro Gly Val Tyr Thr Asn Leu Cys Lys
195    200    205
Phe Thr Glu Trp Ile Glu Lys Thr Val Gln Ala Ser
210    215    220

```

<210> 328  
 <211> 234  
 <212> DNA  
 <213> Homo sapien

```

<400> 328
cgctcgtctc tggtagctgc agccaaatca taaacggcga ggactgcagc ccgcactcgc 60
agccctggca ggccggcactg gtcattgaaa acgaattggt ctgctcgggc gtcctgggtgc 120
atccgcagtg ggtgctgtca gccacacact gtttcagaa ctcctacacc atcgggctgg 180
gcctgcacag tcttgaggcc gaccaagagc caggagacca gatggtggag gccca 234

```

<210> 329  
 <211> 77  
 <212> PRT  
 <213> Homo sapien

```

<400> 329
Leu Val Ser Gly Ser Cys Ser Gln Ile Ile Asn Gly Glu Asp Cys Ser
1      5      10      15

```

Pro His Ser Gln Pro Trp Gln Ala Ala Leu Val Met Glu Asn Glu Leu  
                   20                  25                  30  
 Phe Cys Ser Gly Val Leu Val His Pro Gln Trp Val Leu Ser Ala Thr  
                   35                  40                  45  
 His Cys Phe Gln Asn Ser Tyr Thr Ile Gly Leu Gly Leu His Ser Leu  
                   50                  55                  60  
 Glu Ala Asp Gln Glu Pro Gly Ser Gln Met Val Glu Ala  
   65                                  70                                  75

<210> 330  
 <211> 70  
 <212> DNA  
 <213> Homo sapien

<400> 330  
 cccaacacaa tggcccgatc ccattccctga ctccgcccctc aggatcgctc gtctctggta 60  
 gctgcagcca 70

<210> 331  
 <211> 22  
 <212> PRT  
 <213> Homo sapien

<400> 331  
 Gln His Asn Gly Pro Ile Pro Ser Leu Thr Pro Pro Ser Gly Ser Leu  
   1                  5                  10                  15  
 Val Ser Gly Ser Cys Ser  
                   20

<210> 332  
 <211> 2507  
 <212> DNA  
 <213> Homo sapien

<400> 332  
 tgggtgccgct gcagccggca gagatgggtg agctcatggt cccgctggtg ctccctccttc 60  
 tgcccttcct tctgtatatg gctgcgcccc aaatcaggaa aatgctgtcc agtgggggtg 120  
 gtacatcaac tggtcagctt cctgggaaag tagttgtggt cacaggagct aatacaggta 180  
 tcgggaagga gacagccaaa gagctggctc agagaggagc tcgagtatat ttagcttgcc 240  
 gggatgtgga aaagggggaa ttgggtggcca aagagatcca gaccacgaca gggaaccagc 300  
 aggtgttggt gcggaaaactg gacctgtctg atactaagtc tattcgagct ttgtctaagg 360  
 gcttcttagc tgaggaaaag cacctccacg ttttgatcaa caatgcagga gtgatgatgt 420  
 gtccgtactc gaagacagca gatggctttg agatgcacat aggagtcaac cacttgggtc 480  
 acttcctcct aacccatctg ctgctagaga aactaaagga atcagcccca tcaaggatag 540  
 taaatgtgtc ttccctcgca catcacctgg gaaggatcca ctcccataac ctgcagggcg 600  
 agaaattcta caatgcaggc ctggcctact gtcacagcaa gctagccaac atcctcttca 660  
 cccaggaact ggcccggaaga ctaaaaggct ctggcggttac gacgtattct gtacaccctg 720  
 gcacagtcca atctgaactg gttcggcact catctttcat gagatggatg tgggtggctt 780  
 tctccttttt catcaagact cctcagcagg gagccagac cagcctgcac tgtgccttaa 840  
 cagaaggtct tgagattcta agtgggaatc atttcagtga ctgtcatgtg gcatgggtct 900  
 ctgcccagc tcgtaatgag actatagcaa ggcggctgtg ggacgtcagt tgtgacctgc 960  
 tgggcctccc aatagactaa caggcagtgc cagttggacc caagagaaga ctgcagcaga 1020  
 ctacacagta cttcttgtca aaatgattct ccttcaaggt ttcaaaaacc tttagcaca 1080  
 agagagcaaa acctccagc cttgcctgct tgggtgtccag ttaaaactca gtgtactgcc 1140  
 agattcgtct aaatgtctgt catgtccaga tttactttgc ttctgttact gccagagtta 1200  
 ctagagatat cataatagga taagaagacc ctcatatgac ctgcacagct cattttcctt 1260  
 ctgaaagaaa ctactaccta ggagaatcta agctatagca gggatgattt atgcaaattt 1320  
 gaactagctt ctttgttcac aattcagttc ctcccaacca accagtcttc acttcaagag 1380  
 ggccacactg caacctcagc ttaacatgaa taacaaagac tggctcagga gcagggttg 1440  
 cccaggcatg gtggatcacc ggaggtcagt agttcaagac cagcctggcc aacatgggtga 1500  
 aacccacact ctactaaaaa ttgtgtatat ctttgtgtgt cttcctgttt atgtgtgcca 1560  
 agggagtatt ttcacaaagt tcaaaacagc cacaataatc agagatggag caaaccagtg 1620

ccatccagtc	tttatgcaaa	tgaaatgctg	caaagggaag	cagattctgt	atatgttggt	1680
aactaccac	caagagcaca	tgggtagcag	ggaagaagta	aaaaaagaga	aggagaatac	1740
tggaagataa	tgcacaaaat	gaagggacta	gttaaggatt	aactagccct	ttaaggatta	1800
actagttaag	gattaatagc	aaaagayatt	aaatatgcta	acatagctat	ggaggaattg	1860
agggcaagca	cccaggactg	atgaggtcct	aacaaaaacc	agtgtggcaa	aaaaaaaaaa	1920
aaaaaaaaaa	aaaaatccta	aaaacaaaca	aacaaaaaaa	acaattcttc	attcagaaaa	1980
attatcttag	ggactgatat	tggttaattat	ggtcaattta	ataatatttt	ggggcatttc	2040
cttacattgt	cttgacaaga	ttaaaatgtc	tgtgccaaaa	ttttgtattt	tatttgagga	2100
cttcttatca	aaagtaatgc	tgccaaagga	agtctaagga	attagtagtg	ttcccatcac	2160
ttgtttggag	tgtgctattc	taaaagattt	tgatttcctg	gaatgacaat	tatatattta	2220
ctttggtggg	ggaagagtt	ataggaccac	agtcttcact	tctgataact	gtaaattaat	2280
cttttatttg	actgttttg	accattaagc	tatatgttta	gaaatggta	ttttacggaa	2340
aaattagaaa	aattctgata	atagtgcaga	ataaatgaat	taatgtttta	cttaatttat	2400
attgaactgt	caatgacaaa	taaaaattct	ttttgattat	ttttgtttt	catttaccag	2460
aataaaaacg	taagaattaa	aagtttgatt	acaaaaaaa	aaaaaaa		2507

&lt;210&gt; 333

&lt;211&gt; 3030

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 333

gcaggcgact	tgcgagctgg	gagcgattta	aaacgctttg	gattcccccg	gcctgggtgg	60
ggagagcgag	ctgggtgcc	cctagattcc	ccgccccgc	acctcatgag	ccgacctcg	120
gctccatgga	gcccggcaat	tatgccacct	tggatggagc	caaggatata	gaaggcttgc	180
tgggagcggg	agggggcg	aatctggtcg	cccactcccc	tctgaccagc	caccagcgg	240
cgccctacgt	gatgcctgct	gtcaactatg	cccccttggg	tctgccaggc	tcggcggagc	300
cgccaaagca	atgccaccca	tgccctgggg	tgccccaggg	gacgtcccca	gctcccgtgc	360
cttatggtta	ctttggaggc	gggtactact	cctgcccagt	gtcccggagc	tcgctgaaac	420
cctgtgccca	ggcagccacc	ctggcccgct	accccggga	gactcccacg	gccggggaag	480
agtaccccg	ycgccccact	gagtttgct	tctatccggg	atatccggga	acctaccagc	540
ctatggccag	ttacctggac	gtgtctgtgg	tgcagactct	gggtgctcct	ggagaaccgc	600
gacatgactc	cctgttgct	gtggacagtt	accagtcttg	ggctctcgct	ggtggctgga	660
acagccagat	gtgttgccag	ggagaacaga	acccaccagg	tcccttttgg	aaggcagcat	720
ttgcagactc	cagcgggcag	cacctctctg	acgctctcgc	cttctgtcgc	ggccgcaaga	780
aacgcattcc	gtacagcaag	gggcagttgc	gggagctgga	gcgggagtat	gcggctaaca	840
agttcatcac	caaggacaag	aggcgcaaga	tctcggcagc	caccagcctc	tcggagcgcc	900
agattaccat	ctggtttcag	aaccgcccgg	tcaaagagaa	gaaggttctc	gccaagggtga	960
agaacagcgc	taccctttaa	gagatctcct	tgcttgggtg	ggaggagcga	aagtgggggt	1020
gtcctgggga	gaccaggaac	ctgccaaagg	caggctgggg	ccaaggactc	tgctgagagg	1080
cccctagaga	caacaccctt	cccaggccac	tggctgtgga	actgttcttc	aggcagcgcc	1140
tgggtaccca	gtatgtgcag	ggagacggaa	ccccatgtga	cagcccaactc	caccagggtt	1200
cccaaagaac	ctggcccagt	cataatcatt	catcctgaca	gtggcaataa	tcacgataac	1260
cagtactagc	tgccatgatc	gttagcctca	tattttctat	ctagagctct	gtagagcact	1320
ttagaaaccg	ctttcatgaa	ttgagctaat	tatgaataaa	tttggaaaggc	gatccctttg	1380
cagggaagct	ttctctcaga	cccccttcca	ttacacctct	caccctggta	acagcaggaa	1440
gactgaggag	aggggaacgg	gcagattcgt	tgtgtggctg	tgatgtccgt	ttagcatttt	1500
tctcagctga	cagctgggta	ggtggacaat	tgtagaggct	gtctcttctc	ccctccttgt	1560
ccaccccata	gggtgtaccc	actggtcttg	gaagcaccca	tccttaatac	gatgattttt	1620
ctgtcgtgtg	aaaatgaagc	cagcaggctg	ccoctagtca	gtccttcctt	ccagagaaaa	1680
agagatttga	gaaagtgcct	gggtaattca	ccattaattt	cctcccccaa	actctctgag	1740
tcttccctta	atatttctgg	tggttctgac	caaagcaggt	catggtttgt	tgagcatttg	1800
ggatcccagt	gaagtagatg	tttgtagcct	tgcatactta	gcccttccca	ggcacaacg	1860
gagtggcaga	gtggtgccaa	ccctgttttc	ccagtccacg	tagacagatt	cacagtgcgg	1920
aattctggaa	gctggagaca	gacgggctct	ttgcagagcc	gggactctga	gagggacatg	1980
agggcctctg	cctctgtgtt	cattctctga	tgtcctgtac	ctgggctcag	tgcccgggtg	2040
gactcatctc	ctggccgcgc	agcaaagcca	gcgggttcgt	gctggctcct	cctgcacctt	2100
aggctggggg	tggggggcct	gccggcgcat	tctccacgat	tgagcgcaca	ggcctgaagt	2160
ctggacaacc	cgcagaaccg	aagctccgag	cagcgggtcg	gtggcgagta	gtggggtcgg	2220
tggcgagcag	ttggtggtgg	gccgcggccg	ccactacctc	gaggacattt	ccctcccggg	2280
gccagctctc	ctagaaacct	cgcggcgcc	gccgcagcca	agtgtttatg	gcccgcggtc	2340
gggtgggatc	ctagccctgt	ctcctctcct	gggaaggagt	gaggggtgga	cgtgacttag	2400

acacctacaa	atctattttac	caaagaggag	cccgggactg	agggaaaag	ccaaagagtg	2460
tgagtgcac	cggactgggg	gttcagggga	agaggacgag	gaggaggaag	atgaggtcga	2520
tttcctgatt	taaaaaatcg	tccaagcccc	gtgggtccagc	ttaaggtcct	cggttacatg	2580
cgccgctcac	agcaggtcac	tttctgcctt	ccacgtcctc	cttcaaggaa	gccccatgtg	2640
ggtagctttc	aatatcgag	gttcttactc	ctctgcctct	ataagctcaa	accaccaaac	2700
gatcgggcaa	gtaaaccccc	tccctcgccg	acttcggaac	tggcgagagt	tcagcgacga	2760
tgggcctgtg	gggagggggc	aagatagatg	agggggagcg	gcatgggtgcg	gggtgacccc	2820
ttggagagag	gaaaaaggcc	acaagagggg	ctgccaccgc	cactaacgga	gatggccctg	2880
gtagagacct	ttgggggtct	ggaacctctg	gactcccat	gctctaactc	ccacactctg	2940
ctatcagaaa	cttaaaacttg	aggattttct	ctgtttttca	ctcgcaataa	aytcagagca	3000
aacaaaaaaa	aaaaaaaaaa	aaaactcgag				3030

<210> 334  
 <211> 2417  
 <212> DNA  
 <213> Homo sapien

<400> 334						
ggcgccgct	ctagagctag	tgggatcccc	cgggctgcac	gaattcggca	cgagtgaagt	60
ggagttttac	ctgtattgtt	ttaatttcaa	caagcctgag	gactagccac	aatgtaccc	120
agtttacaaa	tgaggaaaca	ggtgcaaaaa	ggttgttacc	tgtcaaaggt	cgtatgtggc	180
agagccaaga	tttgagccca	gttatgtctg	atgaacttag	cctatgctct	ttaaacttct	240
gaatgctgac	cattgaggat	atctaaactt	agatcaattg	cattttccct	ccaagactat	300
ttacttatca	atacaataat	accaccttta	ccaatctatt	gttttgatac	gagactcaaa	360
tatgccagat	atatgtaaaa	gcaacctaca	agctctctaa	tcatgctcac	ctaaaagatt	420
cccgggatct	aataggctca	aagaaacttc	ttctagaaat	ataaaagaga	aaattggatt	480
atgcaaaaaat	tcattattaa	tttttttcat	ccatccttta	attcagcaaa	catttatctg	540
ttgttgactt	tatgcagtat	ggccttttaa	ggattggggg	acaggtgaag	aacgggggtgc	600
cagaatgcat	cctcctacta	atgaggtcag	tacacatttg	cattttaaaa	tgccctgtcc	660
agctgggcat	ggtggatcat	gcctgtaatc	tcaacattgg	aaggccaagg	caggaggatt	720
gcttcagccc	aggagttcaa	gaccagcctg	ggcaacatag	aaagacccca	tctctcaatc	780
aatcaatcaa	tgccctgtct	ttgaaaataa	aactccttaa	gaaaggttta	atgggcaggg	840
tgtggtagct	catgcctata	atacagcact	ttgggaggct	gaggcaggag	gatcacttta	900
aocccagag	tcaagaccag	cctgggcaac	aagtgcacc	tcacttcaat	tttttaataa	960
aatgaataca	tacataagga	aagataaaaa	gaaaagttta	atgaaagaat	acagtataaa	1020
acaaatctct	tggacctaaa	agtatttttg	ttcaagccaa	atattgtgaa	tcacctctct	1080
gtgttgagga	tacagaatat	ctaagcccag	gaaactgagc	agaaagttca	tgtactaact	1140
aatcaaccgg	aggcaaggca	aaaatgagac	taactaatca	atccgaggca	aggggcaaat	1200
tagacggaac	ctgactctgg	tctattaagc	gacaactttc	cctctgttgt	atttttcttt	1260
tattcaatgt	aaaaggataa	aaactctcta	aaactaaaaa	caatgtttgt	caggagttaa	1320
aaaccatgac	caactaatta	tggggaatca	taaaatatga	ctgtatgaga	tcttgatggg	1380
ttacaaaagt	taccactgtt	taatcacttt	aaacattaat	gaacttaaaa	atgaatttac	1440
ggagattgga	atgtttcttt	cctgttgat	tagttggctc	aggctgccat	aacaaaatac	1500
cacagactgg	gaggcttaag	taacagaaat	tcatttctca	cagttctggg	ggctggaagt	1560
ccacgatcaa	ggtgcaggaa	aggcaggctt	cattctgagg	ccccctctct	ggctcacatg	1620
tggccaccct	cccactgcgt	gtcacatga	cctctttgtg	ctcctggaaa	gaggtgtgg	1680
gggacagagg	gaaagagaag	gagagggaac	tctctggtgt	ctcgtctttc	aaggacccta	1740
acctgggcca	ctttggccca	ggcactgtgg	ggtggggggg	tgtggctgct	ctgctctgag	1800
tggccaagat	aaagcaacag	aaaaatgtcc	aaagctgtgc	agcaaagaca	agccaccgaa	1860
cagggatctg	ctcatcagtg	tggggacctc	caagtcggcc	accctggagg	caagcccca	1920
cagagcccat	gcaaggtggc	agcagcagaa	gaagggaatt	gtccctgtcc	ttggcacatt	1980
cctcaccgac	ctggtgatgc	tggacactgc	gatgaatggt	aatgtggatg	agaatatgat	2040
ggactcccag	aaaaggagac	ccagctgctc	aggtggctgc	aaatcattac	agccttcac	2100
ctggggagga	actgggggcc	tggttctggg	tcagagagca	gcccagtgag	ggtgagagct	2160
acagcctgtc	ctgccagctg	gatccccagt	cccggtcaac	cagtaatcaa	ggctgagcag	2220
atcaggcttc	ccggagctgg	tcttgggaag	ccagccctgg	ggtgagttgg	ctcctgctgt	2280
ggtactgaga	caatattgtc	ataaattcaa	tgcgcccttg	tatccctttt	tcttttttat	2340
ctgtctacat	ctataatcac	tatgcatact	agtctttgtt	agtgtttcta	ttcmacttaa	2400
tagagatatg	ttatact					2417

<210> 335  
 <211> 2984

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 335

atccctcctt	ccccactctc	ctttccagaa	ggcacttggg	gtcttatctg	ttggactctg	60
aaaacacttc	aggcgccctt	ccaaggcttc	cccaaacc	taagcagccg	cagaagcgct	120
cccagagctgc	cttctcccac	actcaggtga	tcgagttgga	gaggaagttc	agccatcaga	180
agtacctgtc	ggcccctgaa	cgggcccacc	tggccaagaa	cctcaagctc	acggagaccc	240
aagtgaagat	atggttccag	aacagacgct	ataagactaa	gcgaaagcag	ctctcctcgg	300
agctgggaga	cttgagagaag	cactcctctt	tgccggccct	gaaagaggag	gccttctccc	360
gggcctccct	ggtctccgtg	tataacagct	atccttacta	cccatacctg	tactgcgtgg	420
gcagctggag	cccagctttt	tggtaatgcc	agctcaggtg	acaaccatta	tgatcaaaaa	480
ctgccttccc	caggggtgtct	ctatgaaaag	cacaaggggc	caaggtcagg	gagcaagagg	540
tgtgcacacc	aaagctattg	gagattttgcg	tggaaatctc	asattcttca	ctggtgagac	600
aatgaaacaa	cagagacagt	gaaagtttta	atacctaagt	cattccccca	gtgcatactg	660
taggtcattt	tttttgcttc	tggctacctg	tttgaagggg	agagagggga	aatcaagtgg	720
tattttccag	cactttgtat	gattttggat	gagctgtaca	cccaaggatt	ctgttctgca	780
actccatctt	cctgtgtcac	tgaatatcaa	ctctgaaaga	gcaaacctaa	caggagaaag	840
gacaaccagg	atgaggatgt	caccaactga	attaaactta	agtccagaag	cctcctgttg	900
gccttggaat	atggccaagg	ctctctctgt	ccctgtaaaa	gagagggggca	aatagagagt	960
ctccaagaga	acgccctcat	gctcagcaca	tatttgcattg	ggagggggag	atgggtggga	1020
ggagatgaaa	atatcagctt	ttcttattcc	tttttattcc	ttttaaaatg	gtatgccaac	1080
ttaagtattt	acaggggtggc	ccaaatagaa	caagatgcac	tcgctgtgat	tttaagacaa	1140
gctgtataaa	cagaactcca	ctgcaagagg	gggggcccgg	ccaggagaat	ctccgcttgt	1200
ccaagacagg	ggcctaagga	gggtctccac	ctgtctgcta	ggggctgttg	cattttttta	1260
ttagtagaaa	gtggaaaggc	ctcttctcaa	cttttttccc	ttgggctgga	gaatttagaa	1320
tcagaagttt	cctggagttt	tcaggctatc	atatatactg	tatcctgaaa	ggcaacataa	1380
ttcttctctc	cctcctttta	aaattttgtg	ttcctttttg	cagcaattac	tcactaaagg	1440
gcttcatttt	agtcagattt	tttagtctgg	ctgcacctaa	cttatgcctc	gcttatttag	1500
cccagatctt	ggtctttttt	tttttttttt	tttttccgtc	tcccaaaagc	tttatctgtc	1560
ttgacttttt	aaaaaagttt	gggggcagat	tctgaattgg	ctaaaagaca	tgcattttta	1620
aaactagcaa	ctcttatttc	tttcctttta	aaatacatag	cattaaatcc	caaatcctat	1680
ttaaagacct	gacagcttga	gaaggtcact	actgcattta	taggaccttc	tggtggttct	1740
gctgttacgt	ttgaagtctg	acaatccttg	agaatctttg	catgcagagg	aggtaagagg	1800
tatttgattt	tcacagagga	agaacacagc	gcagaatgaa	gggccaggct	tactgagctg	1860
tccagtggag	ggctcatggg	tgggacatgg	aaaagaaggc	agcctaggcc	ctggggagcc	1920
cagtccactg	agcaagcaag	ggactgagtg	agccttttgc	aggaaaaggc	taagaaaaag	1980
gaaaaccatt	ctaaaacaca	acaagaaact	gtccaaatgc	tttggaact	gtgtttattg	2040
cctataatgg	gtccccaata	tgggtaacct	agacttcaga	gagaatgagc	agagagcaaa	2100
ggagaaatct	ggctgtcctt	ccattttcat	tctgttatct	caggtgagct	ggtagagggg	2160
agacattaga	aaaaaatgaa	acaacaaaac	aattactaat	gaggtacgct	gaggcctggg	2220
agtctcttga	ctccactact	taattccgtt	tagtgagaaa	cctttcaatt	ttcttttatt	2280
agaaggggcca	gcttactgtt	ggtggcaaaa	ttgccaaat	aagttaatag	aaagttggcc	2340
aatttcaccc	cattttctgt	ggtttgggct	ccacattgca	atgttcaatg	ccacgtgctg	2400
ctgacaccga	ccggagtact	agccagcaca	aaaggcaggg	tagcctgaat	tgctttctgc	2460
tctttacatt	tcttttaaaa	taagcattta	gtgctcagtc	cctactgagt	actctttctc	2520
tccctcctc	tgaatttaat	tctttcaact	tgcaatttgc	aaggattaca	catttcaactg	2580
tgatgtatat	tgtgttgcaa	aaaaaaaaaa	aagtgtcttt	gtttaaaatt	acttggtttg	2640
tgaatccatc	ttgctttttc	cccattggaa	ctagtcatta	acccatctct	gaactggtag	2700
aaaaacatct	gaagagctag	tctatcagca	tctgacaggt	gaattggatg	gttctcagaa	2760
ccatttcacc	cagacagcct	gtttctatcc	tgtttaataa	attagtttgg	gttctctaca	2820
tgcataacaa	accctgtctc	aatctgtcac	ataaaagtct	gtgacttgaa	gttttagtcag	2880
cacccccacc	aaactttatt	tttctatgtg	tttttggcaa	catatgagtg	ttttgaaaat	2940
aaagtaccca	tgtctttatt	agaaaaaaaa	aaaaaaaaaa	aaaa		2984

&lt;210&gt; 336

&lt;211&gt; 147

&lt;212&gt; PRT

&lt;213&gt; Homo sapien

&lt;400&gt; 336

Pro Ser Phe Pro Thr Leu Leu Ser Arg Arg His Leu Gly Ser Tyr Leu

102

```

1           5           10           15
Leu Asp Ser Glu Asn Thr Ser Gly Ala Leu Pro Arg Leu Pro Gln Thr
20           25           30
Pro Lys Gln Pro Gln Lys Arg Ser Arg Ala Ala Phe Ser His Thr Gln
35           40           45
Val Ile Glu Leu Glu Arg Lys Phe Ser His Gln Lys Tyr Leu Ser Ala
50           55           60
Pro Glu Arg Ala His Leu Ala Lys Asn Leu Lys Leu Thr Glu Thr Gln
65           70           75           80
Val Lys Ile Trp Phe Gln Asn Arg Arg Tyr Lys Thr Lys Arg Lys Gln
85           90           95
Leu Ser Ser Glu Leu Gly Asp Leu Glu Lys His Ser Ser Leu Pro Ala
100          105          110
Leu Lys Glu Glu Ala Phe Ser Arg Ala Ser Leu Val Ser Val Tyr Asn
115          120          125
Ser Tyr Pro Tyr Tyr Pro Tyr Leu Tyr Cys Val Gly Ser Trp Ser Pro
130          135          140
Ala Phe Trp
145

```

```

<210> 337
<211> 9
<212> PRT
<213> Homo sapien

```

```

<400> 337
Ala Leu Thr Gly Phe Thr Phe Ser Ala
1           5

```

```

<210> 338
<211> 9
<212> PRT
<213> Homo sapien

```

```

<400> 338
Leu Leu Ala Asn Asp Leu Met Leu Ile
1           5

```

```

<210> 339
<211> 318
<212> PRT
<213> Homo sapien

```

```

<400> 339
Met Val Glu Leu Met Phe Pro Leu Leu Leu Leu Leu Pro Phe Leu
1           5           10           15
Leu Tyr Met Ala Ala Pro Gln Ile Arg Lys Met Leu Ser Ser Gly Val
20           25           30
Cys Thr Ser Thr Val Gln Leu Pro Gly Lys Val Val Val Val Thr Gly
35           40           45
Ala Asn Thr Gly Ile Gly Lys Glu Thr Ala Lys Glu Leu Ala Gln Arg
50           55           60
Gly Ala Arg Val Tyr Leu Ala Cys Arg Asp Val Glu Lys Gly Glu Leu
65           70           75           80
Val Ala Lys Glu Ile Gln Thr Thr Thr Gly Asn Gln Gln Val Leu Val
85           90           95
Arg Lys Leu Asp Leu Ser Asp Thr Lys Ser Ile Arg Ala Phe Ala Lys
100          105          110
Gly Phe Leu Ala Glu Glu Lys His Leu His Val Leu Ile Asn Asn Ala
115          120          125
Gly Val Met Met Cys Pro Tyr Ser Lys Thr Ala Asp Gly Phe Glu Met

```



130	His Ile Gly Val Asn	135	His Leu Gly	140	Leu Thr His Leu Leu
145	Leu Glu Lys Leu Lys	150	Glu Ser Ala Pro	155	Arg Ile Val Asn Val Ser
	165		170		175
	Ser Leu Ala His His		Leu Gly Arg Ile His		Phe His Asn Leu Gln Gly
	180		185		190
	Glu Lys Phe Tyr Asn		Ala Gly Leu Ala Tyr		Cys His Ser Lys Leu Ala
	195		200		205
	Asn Ile Leu Phe Thr		Gln Glu Leu Ala Arg		Arg Leu Lys Gly Ser Gly
	210		215		220
	Val Thr Thr Tyr Ser		Val His Pro Gly Thr		Val Gln Ser Glu Leu Val
	225		230		235
	Arg His Ser Ser Phe		Met Arg Trp Met Trp		Trp Leu Phe Ser Phe Phe
	245		250		255
	Ile Lys Thr Pro Gln		Gln Gly Ala Gln Thr		Ser Leu His Cys Ala Leu
	260		265		270
	Thr Glu Gly Leu Glu		Ile Leu Ser Gly Asn		His Phe Ser Asp Cys His
	275		280		285
	Val Ala Trp Val Ser		Ala Gln Ala Arg Asn		Glu Thr Ile Ala Arg Arg
	290		295		300
	Leu Trp Asp Val Ser		Cys Asp Leu Leu Gly		Leu Pro Ile Asp
	305		310		315

<210> 340  
 <211> 483  
 <212> DNA  
 <213> Homo sapien

<400> 340	gccgaggtct gccttcacac ggaggacacg agactgcttc ctcaagggct cctgcctgcc	60
	tggacactgg tgggaggcgc tgttttagttg gctgttttca gaggggtctt tcggaggggac	120
	ctcctgctgc aggtctggagt gtctttattc ctggcggggag accgcacatt ccactgctga	180
	ggttgtgggg gcggtttatc aggcagtgat aaacataaga tgtcatttcc ttgactccgg	240
	ccttcaattt tctctttggc tgacgacgga gtccgtgggtg tcccgatgta actgaccct	300
	gctccaaacg tgacatcact gatgctcttc tcgggggtgc tgatggcccg cttggtcacg	360
	tgctcaatct cgccattcga ctcttgctcc aaactgtatg aagacacctg actgcacgtt	420
	ttttctgggc ttccagaatt taaagtgaag ggcagcactc ctaagctccg actccgatgc	480
	ctg	483

<210> 341  
 <211> 344  
 <212> DNA  
 <213> Homo sapien

<400> 341	ctgctgctga gtcacagatt tcattataaa tagcctccct aaggaaaata cactgaatgc	60
	tatttttact aaccattcta tttttataga aatagctgag agtttctaaa ccaactctct	120
	gctgccttac aagtattaaa tattttactt ctttccataa agagtagctc aaaatatgca	180
	attaatttaa taatttctga tgatgggttt atctgcagta atatgtatat catctattag	240
	aatttactta atgaaaaact gaagagaaca aaatttgtaa ccactagcac ttaagtactc	300
	ctgattctta acattgtctt taatgaccac aagacaacca acag	344

<210> 342  
 <211> 592  
 <212> DNA  
 <213> Homo sapien

<400> 342	acagcaaaaa agaaactgag aagcccaaty tgctttcttg ttaacatcca cttatccaac	60
	caatgtggaa acttcttata cttggttcca ttatgaagtt ggacaattgc tgctatcaca	120
	cctggcaggt aaaccaatgc caagagagt atggaaacca ttggcaagac tttgttgatg	180

accaggattg	gaattttata	aaaatattgt	tgatgggaag	ttgctaaag	gtgaattact	240
tccctcagaa	gagtgtaaag	aaaagtcaga	gatgctataa	tagcagctat	tttaattggc	300
aagtgccact	gtggaaaagag	ttcctgtgtg	tgctgaagtt	ctgaaggga	gtcaaattca	360
tcagcatggg	ctgtttggtg	caaatgcaaa	agcacaggtc	tttttagcat	gctgggtctct	420
cccgtgtcct	tatgcaaata	atcgtcttct	tctaaatttc	tcctaggcct	cattttccaa	480
agttcttctt	ggtttgtgat	gtcttttctg	ctttccatta	attctataaa	atagtatggc	540
ttcagccacc	cactcttcgc	cttagcttga	ccgtgagtct	cggctgccgc	tg	592

<210> 343  
 <211> 382  
 <212> DNA  
 <213> Homo sapien

<400> 343	
ttcttgacct	cctcctcctt
cttaatgttt	gtggctttct
cttgtaactc	tccttttccc
agactctttg	attgtcagtc
ctgactgccc	aaggggctca
ggggtagtgt	gaagggactg
aaaccaccaa	gctgaaaaaa
	aa

<210> 344  
 <211> 536  
 <212> DNA  
 <213> Homo sapien

<400> 344	
ctgggcctga	agctgtaggg
caataggcca	cataaacttg
gtttaggggg	atgccaagga
agtctttcag	agaaatggat
caccttcgat	tgctgaatg
tcgacctat	atcccccgcc
ccttcttatt	atttgatcta
caactaacct	gccactaata
gtctggccta	tgagtgacta

<210> 345  
 <211> 251  
 <212> DNA  
 <213> Homo sapien

<400> 345	
accttttgag	gtctctctca
tgaatgaagc	ccccatcttt
gcgtgggcca	ggaaatcaca
aaataacata	tcggatttgg
gtgccatttc	c

<210> 346  
 <211> 282  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature  
 <222> (1)...(282)  
 <223> n = A,T,C or G

<400> 346	
cgcgtctctg	acactgtgat
catgacaggg	gttcaaacag
aaagtgcctg	ggccctcctt
	60

ctaagtcttg ttaccaaaaa aaggaaaaag aaaagatctt ctcagttaca aattctggga 120  
 agggagacta tacctggctc ttgccctaag tgagaggtct tccctcccgc accaaaaaat 180  
 agaaaggctt tctatttcac tggcccaggt agggggaagg agagtaactt tgagtctgtg 240  
 ggtctcattt cccaaggtgc cttcaatgct catnaaaacc aa 282

<210> 347  
 <211> 201  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(201)  
 <223> n = A,T,C or G

<400> 347  
 acacacataa tattataaaa tgccatctaa ttggaaggag ctttctatca ttgcaagtca 60  
 taaatataac ttttaaaaa ntactancag cttttaccta ngctcctaaa tgcttgtaaa 120  
 tctgagactg actggaccca cccagaccca gggcaaagat acatgttacc atatcatctt 180  
 tataaagaat tttttttgt c 201

<210> 348  
 <211> 251  
 <212> DNA  
 <213> Homo sapien

<400> 348  
 ctgtaaatca caacatttgt gcatcacttg tgccaagtga gaaaatgttc taaaatcaca 60  
 agagagaaca gtgccagaat gaaactgacc ctaagtoccca ggtgcccctg ggcaggcaga 120  
 aggagacact cccagcatgg aggagggttt atcttttcat cctaggtcag gtctacaatg 180  
 ggggaagggt ttattataga actcccaaca gcccacctca ctctgccac ccaccgatg 240  
 gccctgcctc c 251

<210> 349  
 <211> 251  
 <212> DNA  
 <213> Homo sapien

<400> 349  
 taaaaatcaa gccatttaat tgtatctttg aaggtaaaca atatatgga gctggatcac 60  
 aacccctgag gatgccagag ctatgggtcc agaactggt gtggtattat caacagagtt 120  
 cagaagggtc tgaactctac gtgttaccag agaacataat gcaattcatg cattccactt 180  
 agcaattttg taaaatacca gaaacagacc ccaagagtct ttcaagatga ggaaaattca 240  
 actcctgggt t 251

<210> 350  
 <211> 908  
 <212> DNA  
 <213> Homo sapien

<400> 350  
 ctggacactt tgcgagggt tttgctggct gctgctgctg cccgtcatgc tactcatcgt 60  
 agcccgcocg gtgaagctcg ctgctttccc tacctcctta agtgactgcc aaacgcccac 120  
 cggctggaat tgctctggtt atgatgacag agaaaatgat ctcttctct gtgacaccaa 180  
 cacctgtaaa tttgatggg aatgtttaag aattggagac actgtgactt gcgtctgtca 240  
 gttcaagtgc aacaatgact atgtgcctgt gtgtggctcc aatggggaga gctaccagaa 300  
 tgagtgttac ctgagacagg ctgcatgcaa acagcagagt gagatacttg tgggtgcaga 360  
 aggatcatgt gccacagtcc atgaaggctc tggagaaact agtcaaaagg agacatccac 420  
 ctgtgatatt tgccagtttg gtgcagaatg tgacgaagat gccgaggatg tctgggtgtg 480  
 gtgtaatat gactgttctc aaaccaactt caatcccctc tgcgcttctg atgggaaatc 540  
 ttatgataat gcatgccaaa tcaaagaagc atcgtgtcag aaacaggaga aaattgaagt 600  
 catgtctttg ggtcagatgc aagataacac aactacaact actaagtctg aagatgggca 660

ttatgcaaga	acagattatg	cagagaatgc	taacaaatta	gaagaaagt	ccagagaaca	720
ccacatacct	tgtccggaac	attacaatgg	cttctgcatg	catgggaagt	gtgagcattc	780
tatcaatatg	caggagccat	cttgcagggt	tgatgctggg	tatactggac	aacactgtga	840
aaaaaaggac	tacagtgttc	tatacgttgt	tcccggctct	gtacgatttc	agtatgtctt	900
aatcgacg						908

<210> 351  
 <211> 472  
 <212> DNA  
 <213> Homo sapien

<400> 351						
ccagttat	gcaagtgg	agagcctatt	taccataaat	aataactaaga	accaaactcaa	60
gtcaaacct	aatgccattg	ttattgtgaa	ttaggattaa	gtagtaattt	tcaaaattca	120
cattaacttg	atgttaaaat	cagwtttgyg	agtcattttac	cacaagctaa	atgtgtacac	180
tatgataaaa	acaaccattg	tattcctgtt	tttctaaaca	gtcctaattt	ctaactgt	240
atatatcctt	cgacatcaat	gaactttgtt	ttcttttact	ccagtaataa	agtaggcaca	300
gatctgtcca	caacaaactt	gccctctcat	gccttgcctc	tcacatgct	ctgctccagg	360
tcagccccct	tttggcctgt	ttgttttgtc	aaaaaccta	tctgcttctt	gcttttcttg	420
gtaatatata	tttagggaag	atgttgcttt	gccacacac	gaagcaaagt	aa	472

<210> 352  
 <211> 251  
 <212> DNA  
 <213> Homo sapien

<400> 352						
ctcaaagcta	atctctcggg	aatcaaacca	gaaaagggca	aggatcttag	gcatggtgga	60
tgtggataag	gccagggtcaa	tggtctgcaag	catgcagaga	aagaggtaca	tcggagcggtg	120
caggctgcgt	tccgtcctta	cgatgaagac	cacgatgcag	tttccaaaca	ttgccactac	180
atacatggaa	aggaggggga	agccaaccca	gaaatgggct	ttctctaata	ctgggatacc	240
aataagcaca	a					251

<210> 353  
 <211> 436  
 <212> DNA  
 <213> Homo sapien

<400> 353						
ttttttttt	ttttttttt	tttttttaca	caatgcagtc	atattattat	tgagtatgtg	60
cacattatgg	tattattact	atactgatta	tatttatcat	gtgacttcta	attaraaaat	120
gtatccaaaa	gcaaaacagc	agatatacaa	aattaaagag	acagaagata	gacattaaca	180
gataaggcaa	cttatacatt	gacaatccaa	atccaatata	tttaaacatt	tgaggaaatga	240
gggggacaaa	tggaagccar	atcaaatttg	tgtaaaacta	ttcagtatgt	ttcccttgc	300
tcatgtctga	raaggctctc	ccttcaatgg	ggatgacaaa	ctccaaatgc	cacacaaatg	360
ttaacagaat	actagattca	cactggaacg	ggggtaaaga	agaaattatt	ttctataaaa	420
gggctcctaa	tgtagt					436

<210> 354  
 <211> 854  
 <212> DNA  
 <213> Homo sapien

<400> 354						
ccttttctag	ttcaccagtt	ttctgcaagg	atgctgggta	gggagtgtct	gcaggaggag	60
caagtctgaa	accaaactca	ggaacatag	gaaacgagcc	aggcacaggg	ctgggtggg	120
atcagggacc	accctttggg	ttgatatttt	gcttaactctg	catcttttga	gtaagatcat	180
ctggcagtag	aagctgttct	ccagggtacat	ttctctagct	catgtacaaa	aacatcctga	240
aggactttgt	cagggtgcct	gctaaaagcc	agatgcgttc	ggcacttctt	tggtctgagg	300
ttaattgcac	acctacaggc	actgggtcca	tgctttcaag	tattttgtcc	tcactttagg	360
gtgagtgaaa	gatccccatt	ataggagcac	ttgggagaga	tcatataaaa	gctgactctt	420
gagtacatgc	agtaatgggg	tagatgtgtg	tggtgtgtct	tcattcctgc	aagggtgctt	480

gtagggagtg	gtttccagga	ggaacaagtc	tgaaaccaat	catgaaataa	atggtaggtg	540
tgaactggaa	aactaattca	aaagagagat	cgtgatatca	gtgtggttga	tacaccttgg	600
caatatggaa	ggctctaatt	tgcccatatt	tgaaataata	attcagcttt	ttgtaataca	660
aaataacaaa	ggattgagaa	tcattggtgtc	taattgtataa	aagacccagg	aaacataaat	720
atatcaactg	cataaatgta	aaatgcatgt	gacccaagaa	ggccccaagg	tggcagacaa	780
cattgtaccc	attttccctt	ccaaaatgtg	agcggcgggc	ctgctgcttt	caaggctgtc	840
acacgggatg	tcag					854

<210> 355  
 <211> 676  
 <212> DNA  
 <213> Homo sapien

<400> 355						
gaaattaagt	atgagctaaa	ttccctgtta	aaacctctag	gggtgacaga	tctcttcaac	60
cagggtcaaag	ctgatctttc	tggaatgtca	ccaaccaagg	gcctatatatt	atcaaaaagcc	120
atccacaagt	catacctgga	tgtcagcgaa	gagggcacgg	aggcagcagc	agccactggg	180
gacagcatcg	ctgtaaaaag	cctaccaatg	agagctcagt	tcaaggcgaa	ccaccccttc	240
ctgtttctta	taaggcacac	tcataccaac	acgatcctat	tctgtggcaa	gcttgccctc	300
ccctaatacag	atgggggttga	gtaaggctca	gagttgcaga	tgaggtgcag	agacaatcct	360
gtgactttcc	cacggccaaa	aagctgttca	cacctcacgc	acctctgtgc	ctcagtttgc	420
tcattctgcaa	aataggtcta	ggatttcttc	caaccatttc	atgagttgtg	aagctaaggc	480
tttgttaact	atggaaaaag	gtagacttat	gcagaaagcc	tttctggctt	tcttatctgt	540
ggtgtctcat	ttgagtgtcg	tccagtgaca	tgatcaagtc	aatgagtaaa	attttaaggg	600
attagatttt	cttgacttgt	atgtatctgt	gagatcttga	ataagtgacc	tgacatctct	660
gcttaagaa	aaccag					676

<210> 356  
 <211> 574  
 <212> DNA  
 <213> Homo sapien

<400> 356						
tttttttttt	tttttcagga	aaacattctc	ttactttatt	tgcatctcag	caaaggttct	60
catgtggcac	ctgactggca	tcaaaccaaa	gttcgtaggc	caacaaagat	gggccactca	120
caagcttccc	atttgtagat	ctcagtgcc	atgagtatct	gacacctgtt	cctctcttca	180
gtctcttagg	gaggcttaaa	tctgtctcag	gtgtgctaag	agtgccagcc	caaggkggtc	240
aaaagtccac	aaaactgcag	tctttgctgg	gatagtaagc	caagcagtcg	ctggacagca	300
gagttctttt	cttgggcaac	agataaccag	acaggactct	aatcgtgctc	ttattcaaca	360
ttcttctgtc	tctgcctaga	ctggaataaa	aagccaatct	ctctcgtggc	acaggggaag	420
agatacagc	tcgtttacat	gtgatagatc	taacaaagc	atctaccgaa	gtctggtctg	480
gatagacggc	acagggagct	cttaggtcag	cgctgctggt	tggaggacat	tcctgagtc	540
agctttgcag	cctttgtgca	acagtacttt	ccca			574

<210> 357  
 <211> 393  
 <212> DNA  
 <213> Homo sapien

<400> 357						
tttttttttt	tttttttttt	tttttttttt	tacagaatat	aratgcttta	tcaactgkact	60
taatatggkg	kcttgttcac	tatacttaaa	aatgcaccac	tcataaatat	ttaattcagc	120
aagccacaac	caaracttga	ttttatcaac	aaaaaccct	aatataaac	ggsaaaaaag	180
atagatatata	ttattccagt	ttttttaaaa	cttaaaarat	attccattgc	cgaattaara	240
araarataag	tggttatatg	aaagaagggc	attcaagcac	actaaaraaa	cctgaggkaa	300
gcataatctg	tacaaaatta	aactgtcctt	tttggcattt	taacaaattt	gcaacgktct	360
tttttttctt	tttctgtttt	tttttttttt	tac			393

<210> 358  
 <211> 630  
 <212> DNA  
 <213> Homo sapien

<400> 358  
acagggtaaa caggaggatc cttgctctca cggagcttac attctagcag gaggacaata 60  
ttaatgttta taggaaaatg atgagtttat gacaaaggaa gtagatagtg ttttacaaga 120  
gcatagagta gggaagctaa tccagcacag ggaggtcaca gagacatccc taagggaagt 180  
gagtttaaac tgagagaagc aagtgcctaa actgaaggat gtgttgaaga agaagggaga 240  
gtagaacaat ttgggcagag ggaaccttat agaccctaag gtgggaaggt tcaaagaact 300  
gaaagagagc tagaacagct ggagccgttc tccggtgtaa agaggagtca aagagataag 360  
attaaagatg tgaagattaa gatcttggtg gcattcaggg attggcactt ctacaagaaa 420  
tactgaagg gagtaatgtg acattacttt tcatttcagg atggccattc taactccagg 480  
gggtagactg gactaggtaa gactggaggc aggtagacct cttctaaggc ctgcgatagt 540  
gaaagacaaa aataagtggg gaaattcagg ggatagttaa aatcagtagg acttaatgag 600  
caagccagag gttcctccac aacaaccagt 630

<210> 359  
<211> 620  
<212> DNA  
<213> Homo sapien

<400> 359  
acagcattcc aaaatataca tctagagact aarrgtaaat gctctatagt gaagaagtaa 60  
taattaaaaa atgctactaa tatagaaaat ttataatcag aaaaataaat attcagggag 120  
ctcaccagaa gaataaagtg ctctgccagt tattaaagga ttactgctgg tgaattaaat 180  
atggcattcc ccaagggaag tagagagatt cttctggatt atgttcaata tttatttcac 240  
aggattaact gttttaggaa cagatataaa gcttcgccac ggaagagatg gacaaagcac 300  
aaagacaaca tgatacctta ggaagcaaca ctaccctttc aggcataaaa tttggagaaa 360  
tgcaacatta tgcttcatga ataatatgta gaaagaaggt ctgatgaaaa tgacatcctt 420  
aatgtaagat aactttataa gaattctggg tcaaataaaa ttctttgaag aaaacatcca 480  
aatgtcattg acttatcaaa tactatcttg gcatataacc tatgaaggca aaactaaaca 540  
aacaataaagc tcacacaaa caaaaccatc aacttatttt gtattctata acatacgaga 600  
ctgtaaagat gtgacagtgt 620

<210> 360  
<211> 431  
<212> DNA  
<213> Homo sapien

<400> 360  
aaaaaaaaa agccagaaca acatgtgata gataatatga ttggctgcac acttccagac 60  
tgatgaatga tgaacgtgat ggactattgt atggagcaca tcttcagcaa gagggggaaa 120  
tactcatcat ttttgccag cagttgtttg atcaccaaac atcatgccag aatactcagc 180  
aaaccttctt agctcttgag aagtcaaagt ccgggggaat ttattcctgg caattttaat 240  
tggaactcctt atgtgagagc agcggctacc cagctggggg ggtggagcga acccgctact 300  
agtggacatg cagtggcaga gctcctggtg accacctaga ggaatacaca ggcacatgtg 360  
tgatgccaaag cgtgacacct gtagcactca aatttgtctt gtttttgtct ttcggtgtgt 420  
agattcttag t 431

<210> 361  
<211> 351  
<212> DNA  
<213> Homo sapien

<400> 361  
acactgattt ccgatcaaaa gaatcatcat ctttaccttg acttttcagg gaattactga 60  
actttcttct cagaagatag ggcacagcca ttgccttggc ctcaactgaa gggctctgcat 120  
ttgggtcctc tgggtctctt ccaagtttcc cagccactcg agggagaaat atcgggaggt 180  
ttgacttctt ccggggcttt cccgaggggt tcaccgtgag ccctgcccgc ctccaggctg 240  
caatcctgga ttcaatgtct gaaacctcgc tctctgcctg ctggacttct gaggccgtca 300  
ctgccactct gtccctccagc tctgacagct cctcatctgt ggtcctgttg t 351

<210> 362  
<211> 463

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 362

acttcatcag	gccataatgg	gtgcctcccg	tgagaatcca	agcacctttg	gactgcgcga	60
tgtagatgag	ccggctgaag	atcttgcgca	tgcgcggtt	cagggcgaag	ttcttggcgc	120
ccccggtcac	agaaatgacc	aggttgggtg	ttttcaggtg	ccagtgcctg	gtcagcagct	180
cgtaaaggat	ttccgcgtcc	gtgtcgcagg	acagacgtat	atacttccct	ttcttcccca	240
gtgtctcaaa	ctgaatatcc	ccaaaggcgt	cggtaggaaa	ttccttgggtg	tggttcttgt	300
agttccattt	ctcactttgg	ttgatctggg	tgccttccat	gtgctggctc	tgggcatagc	360
cacacttgca	cacattctcc	ctgataagca	cgatggtgtg	gacaggaagg	aaggatttca	420
ttgagcctgc	ttatggaac	tggtattgtt	agcttaaata	gac		463

&lt;210&gt; 363

&lt;211&gt; 653

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(653)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 363

acccccgagt	ncctgnctgg	catactgnga	acgaccaacg	acacacccaa	gctcggcctc	60
ctcttggnga	ttctgggtga	catcttcatg	aatggcaacc	gtgccagwga	ggctgtcctc	120
tgggaggcac	tacgcaagat	gggactgcgt	cctgggggtga	gacatcctct	ccttggagat	180
ctaacgaaac	ttctcaccta	tgagttgtaa	agcagaaata	cctgnactac	agacgagtgc	240
ccaacagcaa	ccccccggaa	gtatgagttc	ctctrggggc	tccgttccta	ccatgagasc	300
tagcaagatg	naagtgttga	gantcattgc	agaggttcag	aaaagagacc	cntcgtgact	360
ggtctgcaca	gttcatggag	gctgcagatg	aggccttggg	tgctctggat	gctgctgcag	420
ctgaggccga	agcccgggct	gaagcaagaa	cccgcagggg	aattggagat	gaggctgtgt	480
ntgggccctg	gagctgggat	gacattgagt	ttgagctgct	gacctgggat	gaggaaggag	540
atthttggaga	tccntgggtc	agaattccat	ttacctctg	ggccagatac	caccagaatg	600
cccgcctccag	attccctcag	acctttgccc	gtcccattat	tggtcstggt	ggt	653

&lt;210&gt; 364

&lt;211&gt; 401

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 364

actagaggaa	agacgttaaa	ccactctact	accacttgtg	gaactctcaa	agggtaaattg	60
acaaagccaa	tgaatgactc	taaaaaacaat	atttacattt	aatggtttgt	agacaataaa	120
aaaacaaggt	ggatagatct	agaattgtaa	cattttaaga	aaaccatagc	atttgacaga	180
tgagaaagct	caattataga	tgcaaaagtta	taactaaact	actatagtag	ttaaagaaata	240
catttcacac	ccttcatata	aattcactat	cttggcttga	ggcactccat	aaaatgtatc	300
acgtgcatag	taaatcttta	tatttgctat	ggcgttgac	tagaggactt	ggactgcaac	360
aagtggatgc	gcggaaaatg	aaatcttctt	caatagccca	g		401

&lt;210&gt; 365

&lt;211&gt; 356

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 365

ccagtgtcat	atttgggctt	aaaatttcaa	gaagggcact	tcaaattggct	ttgcatttgc	60
atgtttcagt	gctagagcgt	aggaatagac	cctggcgctc	actgtgagat	gttcttcagc	120
taccagagca	tcaagtctct	gcagcaggtc	attcttgggt	aaagaaatga	cttccacaaa	180
ctctccatcc	cctggctttg	gcttcggcct	tgcgttttcg	gcacatctc	cgtaaatggt	240
gactgtcacg	atgtgtatag	tacagtttga	caagcctggg	tccatacaga	ccgctggaga	300
acattcggca	atgtcccctt	tgtagccagt	ttcttcttcg	agctcccggg	gagcag	356

<210> 366  
 <211> 1851  
 <212> DNA  
 <213> Homo sapien

<400> 366

tcataccat	tgccagcagc	ggcaccgtta	gtcagggtttt	ctgggaatcc	cacatgagta	60
cttcogtgtt	cttcattctt	cttcaatagc	cataaatctt	ctagctctgg	ctggctgttt	120
tcaacttcctt	taagcctttg	tgactcttcc	tctgatgtca	gctttaagtc	ttgttctgga	180
ttgctgtttt	cagaagagat	ttttaacatc	tgtttttctt	tgtagtcaga	aagtaactgg	240
caaattacat	gatgatgact	agaaacagca	tactctctgg	ccgtctttcc	agatcttgag	300
aagatacatc	aacatttttg	tcaagtagag	ggctgactat	acttgctgat	ccacaacata	360
cagcaagtat	gagagcagtt	cttccatctc	tatccagcgc	atttaaattc	gcttttttct	420
tgattaaaaa	tttcaccact	tgctgttttt	gctcatgtat	accaagtagc	agtgggtgtga	480
ggccatgctt	gtttttttgat	tccgatctcag	caccgtataa	gagcagtgct	ttggccatta	540
atttatcttc	attgtagaca	gcatagtgta	gagtggattt	tccatactca	tctggaatat	600
ttggatcagt	gccatgttcc	agcaacatta	acgcacattc	atcttcctgg	cattgtacgg	660
cctttgtcag	agctgtcctc	tttttgttgt	caaggacatt	aagttgacat	cgtctgtcca	720
gcacgagttt	tactacttct	gaattcccat	tggcagaggc	cagatgtaga	gcagtcctct	780
tttgcttgct	cctctgttc	acatccgtgt	ccctgagcat	gacgatgaga	tcctttctgg	840
ggactttacc	ccaccaggca	gctctgtgga	gcttgtccag	atcttctcca	tggaactggg	900
acctgggagc	catgaaggcg	ctgtcatcgt	agtctcccca	agcgaccacg	ttgctcttgc	960
cgctccccctg	cagcagggga	agcagtggca	gcaccacttg	cacctcttgc	tcccaagcgt	1020
cttcacagag	gagtcgttgt	ggtctccaga	agtgtccacg	ttgctcttgc	cgctccccct	1080
gtccatccag	ggaggaagaa	atgcaggaaa	tgaaagatgc	atgcacgatg	gtatactcct	1140
cagccatcaa	acttctggac	agcaggtcac	ttccagcaag	gtggagaaaag	ctgtccaccc	1200
acagaggatg	agatccagaa	accacaatat	ccattcacaa	acaaacactt	ttcagccaga	1260
cacaggtact	gaaatcatgt	catctgcggc	aacatggtgg	aacctacca	atacacatc	1320
aagagatgaa	gacactgcag	tatatctgca	caacgtaata	ctcttcatcc	ataacaaaat	1380
aataataatt	tctcttgagg	ccatatggat	gaactatgaa	ggaagaactc	cccgaagaag	1440
ccagtgcag	agaagccaca	ctgaagctct	gtcctcagcc	atcagcgcca	cggacaggar	1500
tgtgtttctt	ccccagtgt	gcagcctcaa	gttatcccg	agctgccgca	gcacacgggtg	1560
gctcctgaga	aacaccccg	ctcttccggg	ctaacacagg	caagtcaata	aatgtgataa	1620
tcacataaac	agaattaaaa	gcaaagtcac	ataagcatct	caacagacac	agaaaaggca	1680
tttgacaaaa	tccagcatcc	ttgtatttat	tggtgcagtt	ctcagaggaa	atgcttctaa	1740
cttttcccca	tttagtatta	tgttggctgt	gggcttgta	taggtgggtt	ttattacttt	1800
aaggatgtgc	ccttctatgc	ctgttttgct	gagggtttta	attctcgtgc	c	1851

<210> 367  
 <211> 668  
 <212> DNA  
 <213> Homo sapien

<400> 367

cttgagcttc	caaataaygga	agactggccc	ttacacasgt	caatgttaaa	atgaatgcat	60
ttcagtattt	tgaagataaa	attrgtagat	ctataccttg	ttttttgatt	cgatatcagc	120
acctataag	agcagtgtct	tgcccatata	tttatctttc	attrtagaca	gcrtagtgya	180
gagtgggtatt	tccatactca	tctggaatat	ttggatcagt	gccatgttcc	agcaacatta	240
acgcacattc	atcttctctg	cattgtacgg	cctgtcagta	ttagacccaa	aaacaaatta	300
catatcttag	gaattcaaaa	taacattcca	cagctttcac	caactagtta	tatttaaagg	360
agaaaaactca	tttttatgcc	atgtattgaa	atcaaaccga	cctcatgctg	atatagttgg	420
ctactgcata	cctttatcag	agctgtcctc	tttttgttgt	caaggacatt	aagttgacat	480
cgtctgtcca	gcaggagttt	tactacttct	gaattcccat	tggcagaggc	cagatgtaga	540
gcagtcctat	gagagtgcga	agacttttta	ggaaattgta	gtgcactagc	tacagccata	600
gcaatgattc	atgtaactgc	aaacactgaa	tagcctgcta	ttactctgcc	ttcaaaaaaa	660
aaaaaaaa						668

<210> 368  
 <211> 1512  
 <212> DNA  
 <213> Homo sapien



&lt;400&gt; 368

gggtcgccca	gggggsgcgt	gggctttcct	cgggtgggtg	tgggttttcc	ctgggtgggg	60
tgggctgggc	trgaatcccc	tgctgggggt	ggcagggtttt	ggctgggatt	gacttttytc	120
ttcaaacaga	ttggaaaccc	ggagttacct	gctagttggt	gaaactgggt	ggtagacgcg	180
atctgttggc	tactactggc	ttctcctggc	tgttaaaagc	agatgggtgt	tgaggttgat	240
tccatgccgg	ctgcttcttc	tgtgaagaag	ccatttgggtc	tcaggagcaa	gatgggcaag	300
tgggtgctgcc	gttgcttccc	ctgctgcagg	gagagcggca	agagcaacgt	gggcacttct	360
ggagaccacg	acgactctgc	tatgaagaca	ctcaggagca	agatgggcaa	gtggtgccgc	420
cactgcttcc	cctgctgcag	ggggagtggc	aagagcaacg	tgggcgcttc	tggagaccac	480
gacgaytctg	ctatgaagac	actcaggaac	aagatgggca	agtgggtgctg	ccactgcttc	540
ccctgctgca	gggggagcrg	caagagcaag	gtgggcgctt	ggggagacta	cgatgacagt	600
gccttcatgg	agcccaggta	ccacgtccgt	ggagaagatc	tggacaagct	ccacagagct	660
gcctgggtggg	gtaaagtccc	cagaaaggat	ctcatcgtca	tgctcaggga	cactgacgtg	720
aacaagaagg	acaagcaaaa	gaggactgct	ctacatctgg	cctctgccaa	tgggaattca	780
gaagtagtaa	aactcstgct	ggacagacga	tgtcaactta	atgtccttga	caacaaaaag	840
aggacagctc	tgayaaaggc	cgtacaatgc	caggaagatg	aatgtgcgtt	aatgttgctg	900
gaacatggca	ctgatccaaa	tattccagat	gagtatggaa	ataccactct	rcactaygct	960
rtctayaatg	aagataaatt	aatggccaaa	gcactgctct	tataygggtg	tgatatacgaa	1020
tcaaaaaaca	aggtatagat	ctactaattt	tatcttcaaa	atactgaaat	gcattcattt	1080
taacattgac	gtgtgtaagg	gccagtcttc	cgtatttgga	agctcaagca	taacttgaat	1140
gaaaaatattt	tgaaatgacc	taattatctm	agactttatt	ttaaataattg	ttattttcaa	1200
agaagcatta	gagggtagac	tttttttttt	ttaaattgac	ttctggtaaa	tacttttggt	1260
gaaaacactg	aaattgtaaa	aggtataact	tactattttt	caatttttcc	ctcctaggat	1320
ttttttcccc	taatgaatgt	aagatggcaa	aatttgccct	gaaataggtt	ttacatgaaa	1380
actccaagaa	aagttaaaca	tgtttcagtg	aatagagatc	ctgctccttt	ggcaagttcc	1440
taaaaaacag	taatagatac	gaggtgatgc	gcctgtcagt	ggcaagggtt	aagatatattc	1500
tgatctcgtg	cc					1512

&lt;210&gt; 369

&lt;211&gt; 1853

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 369

gggtcgccca	gggggsgcgt	gggctttcct	cgggtgggtg	tgggttttcc	ctgggtgggg	60
tgggctgggc	trgaatcccc	tgctgggggt	ggcagggtttt	ggctgggatt	gacttttytc	120
ttcaaacaga	ttggaaaccc	ggagttacct	gctagttggt	gaaactgggt	ggtagacgcg	180
atctgttggc	tactactggc	ttctcctggc	tgttaaaagc	agatgggtgt	tgaggttgat	240
tccatgccgg	ctgcttcttc	tgtgaagaag	ccatttgggtc	tcaggagcaa	gatgggcaag	300
tgggtgctgcc	gttgcttccc	ctgctgcagg	gagagcggca	agagcaacgt	gggcacttct	360
ggagaccacg	acgactctgc	tatgaagaca	ctcaggagca	agatgggcaa	gtggtgccgc	420
cactgcttcc	cctgctgcag	ggggagtggc	aagagcaacg	tgggcgcttc	tggagaccac	480
gacgaytctg	ctatgaagac	actcaggaac	aagatgggca	agtgggtgctg	ccactgcttc	540
ccctgctgca	gggggagcrg	caagagcaag	gtgggcgctt	ggggagacta	cgatgacagy	600
gccttcatgg	akcccaggta	ccacgtccrt	ggagaagatc	tggacaagct	ccacagagct	660
gcctgggtggg	gtaaagtccc	cagaaaggat	ctcatcgtca	tgctcaggga	cackgaygtg	720
aacaagargg	acaagcaaaa	gaggactgct	ctacatctgg	cctctgccaa	tgggaattca	780
gaagtagtaa	aactcstgct	ggacagacga	tgtcaactta	atgtccttga	caacaaaaag	840
aggacagctc	tgayaaaggc	cgtacaatgc	caggaagatg	aatgtgcgtt	aatgttgctg	900
gaacatggca	ctgatccaaa	tattccagat	gagtatggaa	ataccactct	rcactaygct	960
rtctayaatg	aagataaatt	aatggccaaa	gcactgctct	tataygggtg	tgatatacgaa	1020
tcaaaaaaca	agcatggcct	cacaccactg	ytacttggtr	tacatgagca	gataatggaag	1080
gtsgtgaaat	ttttaatyaa	gaaaaaagcg	aattttaaatt	gcrctggata	gatattggaag	1140
ractgctctc	atacttgctg	tatgttggtg	atcagcaagt	atagtcagcc	ytctacttga	1200
gcaaaatrtr	gatgtatctt	ctcaagatct	ggaaagacgg	ccagagagta	tgctgtttct	1260
agtcatcatc	atgtaatttg	ccagttactt	tctgactaca	aagaaaaaca	gatgttaaaa	1320
actcttcttg	aaaacagcaa	tccagaacca	gacttaaagc	tgacatcaga	ggaagagtca	1380
caaaggctta	aaggaagtga	aaacagccag	ccagaggcat	ggaaactttt	aaatttaaac	1440
ttttggttta	atgttttttt	tttttgccct	aataatatta	gatagtccca	aatgaaatwa	1500
cctatgagac	taggctttga	gaatcaatag	attctttttt	taagaatctt	ttggctagga	1560
gcggtgtctc	acgcctgtaa	ttccagcacc	ttgagaggct	gaggtgggca	gatcacgaga	1620

tcaggagatc	gagaccatcc	tggctaacac	ggtgaaaccc	catctctact	aaaaatacaa	1680
aaacttagct	gggtgtggtg	gcgggtgcct	gtagtcccag	ctactcagga	rgctgaggca	1740
ggagaatggc	atgaacccgg	gaggtggagg	ttgcagttag	ccgagatccg	ccactacact	1800
ccagcctggg	tgacagagca	agactctgtc	tcaaaaaaaaa	aaaaaaaaaa	aaa	1853

&lt;210&gt; 370

&lt;211&gt; 2184

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 370

ggcacgagaa	ttaaaaccct	cagcaaaaaca	ggcatagaag	ggacataacct	taaagtaata	60
aaaaccacct	atgacaagcc	cacagccaac	ataataactaa	atgggggaaaa	gttagaagca	120
tttcctctga	gaactgcaac	aataaatata	aggatgctgg	attttgtcaa	atgccttttc	180
tgtgtctgtt	gagatgctta	tgtgactttg	cttttaattc	tgtttatgtg	attatcacat	240
ttattgactt	gcctgtgtta	gaccggaaga	gctgggggtg	ttctcaggag	ccaccgtgtg	300
ctgcggcagc	ttcgggataa	cttgaggctg	catcactggg	gaagaaacac	aytccgtgcc	360
gtggcgctga	tggctgagga	cagagcttca	gtgtggcttc	tctgcgactg	gcttcttcgg	420
ggagtctctc	cttcatagtt	catccatatg	gctccagagg	aaaattatat	tattttgtta	480
tggatgaaga	gtattacgtt	gtgcagatat	actgcagtgt	cttcactctc	tgatgtgtga	540
ttgggtaggt	tccaccatgt	tgccgcagat	gacatgattt	cagtacctgt	gtctggctga	600
aaagtgtttg	tttgtgaatg	gatattgtgg	tttctggatc	tcactcctctg	tgggtggaca	660
gctttctcca	ccttgctgga	agtgacctgc	tgtccagaag	tttgatggct	gaggagtata	720
ccatcgtgca	tgcatctttc	atttctctga	tttcttctc	cctggatgga	cagggggagc	780
ggcaagagca	acgtgggcac	ttctggagac	cacaacgact	cctctgtgaa	gacgcttggg	840
agcaagaggt	gcaagtgggtg	ctgccactgc	ttcccctgct	gcaggggagc	ggcaagagca	900
acgtggtcgc	ttggggagac	tacgatgaca	gcgccttcat	ggatcccagg	taccacgtcc	960
atggagaaga	tctggacaag	ctccacagag	ctgcctgggtg	gggtaaaagtc	cccagaaagg	1020
atctcatcgt	catgctcagg	gacacggatg	tgaacaagag	ggacaagcaa	aagaggactg	1080
ctctacatct	ggcctctgcc	aatgggaatt	cagaagtagt	aaaactcgtg	ctggacagac	1140
gatgtcaact	taatgtcctt	gacaacaaaa	agaggacagc	tctgacaaag	gccgtacaat	1200
gccaggaaga	tgaatgtgcg	ttaatgttgc	tggaacatgg	cactgatcca	aatattccag	1260
atgagtatgg	aaataccact	ctacactatg	ctgtctacaa	tgaagataaa	ttaatggcca	1320
aagcactgct	cttatacggt	gctgatctcg	aatcaaaaaa	caagcatggc	ctcacaccac	1380
tgctacttgg	tatacatgag	caaaaacagc	aagtggtgaa	atttttaatc	aagaaaaaag	1440
cgaatttaaa	tgcgctggat	agatatggaa	gaactgctct	catacttgct	gtatgttgtg	1500
gatcagcaag	tatagtcagc	cctctacttg	agcaaaatgt	tgatgtatct	tctcaagatc	1560
tggaaagacg	gccagagagt	atgctgtttc	tagtcatcat	catgtaattt	gccagttact	1620
ttctgactac	aaagaaaaac	agatgttaaa	aatctcttct	gaaaacagca	atccagaaca	1680
agacttaaac	ctgacatcag	aggaagagtc	acaaaggctt	aaaggaagtg	aaaacagcca	1740
gccagaggca	tggaaacttt	taaatttaaa	cttttggttt	aatgtttttt	ttttttgctt	1800
taataatatt	agatagtcct	aaatgaaatw	acctatgaga	ctaggctttg	agaatcaata	1860
gattcttttt	ttaagaatct	tttggttagg	agcgggtgtc	cacgcctgta	attccagcac	1920
cttgagaggc	tgaggtgggc	agatcacgag	atcaggagat	cgagaccatc	ctggctaaca	1980
cggtgaaacc	ccatctctac	taaaaatata	aaaacttagc	tgggtgtggt	ggcgggtgcc	2040
tgtagtccca	gctactcagg	argctgaggc	aggagaatgg	catgaaccgc	ggaggtggag	2100
gttgacgtga	gccgagatcc	gccactacac	tccagcctgg	gtgacagagc	aagactctgt	2160
ctcaaaaaaa	aaaaaaaaaa	aaaa				2184

&lt;210&gt; 371

&lt;211&gt; 1855

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(1855)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 371

tgcacgcac	ggccagtgtc	tgtgccacgt	acactgacgc	cccctgagat	gtgcacgccg	60
cacgcgcacg	ttgcacgcgc	ggcagcggtc	tggctggctt	gtaacggctt	gcacgcgcac	120

gccgccccg	cataaccgtc	agactggcct	gtaacggcct	gcaggcgac	gccgcacgcg	180
cgtaacggct	tggctgccct	gtaacggcct	gcacgtgcat	gctgcacgcg	cgtaacggc	240
ttggctggca	tgtagccgct	tggcttggct	ttgcattytt	tgctkggctk	ggcgttgkty	300
tcttggattg	acgcttcctc	cttggatkgc	cgtttcctcc	ttggatkgac	gtttcytyty	360
tcgcgttcc	ttgctggact	tgacctttty	tctgctgggt	ttggcattcc	tttgggggtg	420
gctgggtggt	ttctccgggg	gggktkgccc	ttcttgggg	gggcgtgggk	cgccccccagg	480
gggcgtgggc	tttccccggg	tgggtgtggg	ttttctctgg	gtgggggtgg	ctgtgctggg	540
atccccctgc	tgggggttgg	agggattgac	ttttttcttc	aaacagattg	gaaacccgga	600
gtaacntgct	agtgtgtgaa	actggttggg	agacgcgac	tgctggtact	actgtttctc	660
ctggctgtta	aaagcagatg	gtggctgagg	ttgattcaat	gccggctgct	tcttctgtga	720
agaagccatt	tgtctcagg	agcaagatgg	gcaagtgggt	cgccactgct	tcccctgctg	780
caggggggag	ggcaagagca	acgtgggcac	ttctggagac	cacaacgact	cctctgtgaa	840
gacgcttggg	agcaagagg	gcaagtgggt	ctgcccactg	cttcccctgc	tcagggggag	900
cggaagagc	aacgtggkcg	cttggggaga	ctacgatgac	agcgccctca	tggakcccag	960
gtaccacgtc	crtggagaag	atctggacaa	gctccacaga	gctgcctggt	ggggtaaagt	1020
ccccagaaa	gatctcatcg	tcatgctcag	ggacactgay	gtgaacaaga	rggacaagca	1080
aaagaggact	gctctacatc	tggcctctgc	caatgggaat	tcagaagtag	taaaactcgt	1140
gctggacaga	cgatgtcaac	ttaatgtcct	tgacaacaaa	aagaggacag	ctctgacaaa	1200
ggcgtgtaca	tggcagggaag	atgaatgtgc	gttaatgttg	ctggaacatg	gcactgatcc	1260
aaatattcca	gatgagtag	gaaataccac	tctacactat	gctgtctaca	atgaagataa	1320
attaatggcc	aaagcactgc	tcttatacgg	tgctgatata	gaatcaaaaa	acaaggtata	1380
gatctactaa	ttttatcttc	aaaatactga	aatgcattca	ttttaacatt	gacgtgtgta	1440
agggccagtc	ttccgtatatt	ggaagctcaa	gcataaactg	aatgaaaata	ttttgaaatg	1500
acctaattat	ctaagacttt	atttttaata	ttgttatttt	caaagaagca	ttagagggtg	1560
cagttttttt	tttttaaatg	cacttctggg	aaataacttt	gttgaaaaca	ctgaatttgt	1620
aaaaggtaat	acttactatt	tttcaatttt	tccctcctag	gatttttttc	ccctaatagaa	1680
tgtaagatgg	caaaatttgc	cctgaaatag	gttttacatg	aaaactccaa	gaaaagttaa	1740
acatgtttca	gtgaatagag	atcctggtcc	tttggaaggt	tcctaaaaaa	cagtaataga	1800
tacgaggtga	tgcgcctgtc	agtggcaagg	tttaagatat	ttctgatctc	gtgcc	1855

&lt;210&gt; 372

&lt;211&gt; 1059

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 372

gcaacgtggg	cacttctgga	gaccacaacg	actcctctgt	gaagacgctt	gggagcaaga	60
ggtgcaagt	gtgctgcca	ctgcttcccc	tgctgcagg	gagcggcaag	agcaacgtgg	120
gcgcttgrg	agactmcgat	gacagygcct	tcatggagcc	caggtaccac	gtccgtggag	180
aagatctgga	caagctccac	agagctgccc	tgggtgggta	aagtccccag	aaaggatctc	240
atcgtcatgc	tcaggacac	tgaygtgaac	aagarggaca	agcaaaagag	gactgctcta	300
catctggcct	ctgccaatgg	gaattcagaa	gtagtataaac	tcstgctgga	cagacgatgt	360
caacttaatg	tccttgacaa	caaaaagagg	acagctctga	yaaaggccgt	acaatgccag	420
gaagatgaat	gtgctgtaat	gttgctggaa	catggcactg	atccaaatat	tccagatgag	480
tatggaaata	ccactctrca	ctaygctrct	tayaatgaag	ataaattaat	ggccaaagca	540
ctgctcttat	ayggtgctga	tatcgaatca	aaaaacaagg	tatagatcta	ctaattttat	600
cttcaaaata	ctgaaatgca	ttcattttta	cattgacgtg	tgtaagggcc	agtcttccgt	660
atttggaagc	tcaagcataa	cttgaatgaa	aataattttga	aatgacctaa	ttatctaaga	720
ctttatttta	aatattgtta	ttttcaaaaga	agcattagag	ggtacagttt	ttttttttta	780
aatgcacttc	tggtaaatac	ttttgttgaa	aacactgaat	ttgtaaaagg	taatacttac	840
tatttttcaa	tttttccctc	ctaggatttt	tttcccctaa	tgaatgtaag	atggcaaaat	900
ttgccttgaa	ataggtttta	catgaaaact	ccaagaaaag	ttaaactatg	ttcagtgaat	960
agagatcctg	ctcctttggc	aagttcctaa	aaaacagtaa	tagatacgag	gtgatgcgcc	1020
tgtagtggtg	aaggtttaag	atattttctga	tctcgtgcc			1059

&lt;210&gt; 373

&lt;211&gt; 1155

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 373

atgggtggtg	aggttgatcc	catgccggct	gcctcttctg	tgaagaagcc	atttggtctc	60
------------	------------	------------	------------	------------	------------	----

aggagcaaga	tgggcaagt	gtgctgccgt	tgcttcccct	gctgcaggga	gagcggcaag	120
agcaacgtgg	gcacttctgg	agaccacgac	gactctgcta	tgaagacact	caggagcaag	180
atgggcaagt	ggtgccgcca	ctgcttcccc	tgctgcagg	ggagtggcaa	gagcaacgtg	240
ggcgcttctg	gagaccacga	cgactctgct	atgaagacac	tcaggaacaa	gatgggcaag	300
tggtgctgcc	actgcttccc	ctgctgcagg	gggagcggca	agagcaaggt	ggcgcttgg	360
ggagactacg	atgacagtgc	cttcatggag	cccaggtacc	acgtccgtgg	agaagatctg	420
gacaagctcc	acagagctgc	ctggtggggg	aaagtcccca	gaaaggatct	catcgctcatg	480
ctcagggaca	ctgacgtgaa	caagaaggac	aagcaaaaga	ggactgctct	acatctggcc	540
tctgccaatg	ggaattcaga	agtagtaaaa	ctcctgctgg	acagacgatg	tcaacttaat	600
gtccttgaca	acaaaaagag	gacagctctg	ataaaggccg	tacaatgcc	ggaagatgaa	660
tgtgcgttaa	tggtgctgga	acatggcact	gatccaaata	ttccagatga	gtatggaaat	720
accactctgc	actacgctat	ctataatgaa	gataaattaa	tggccaaagc	actgctctta	780
tatggtgctg	atatcgaatc	aaaaaacaag	catggcctca	caccactggt	acttggtgta	840
catgagcaaa	aacagcaagt	cgtgaaattt	ttaatcaaga	aaaaagcgaa	tttaaatgca	900
ctggatagat	atggaaggac	tgctctcata	cttgctgtat	gttggtggatc	agcaagtata	960
gtcagccttc	tacttgagca	aaatattgat	gtatcttctc	aagatctatc	tggacagacg	1020
gccagagagt	atgctgtttc	tagtcatcat	catgtaattt	gccagttact	ttctgactac	1080
aaagaaaaac	agatgctaaa	aatctcttct	gaaaacagca	atccagaaaa	tgtctcaaga	1140
accagaaata	aataa					1155

&lt;210&gt; 374

&lt;211&gt; 2000

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 374

atggtggttg	aggttgattc	catgccggct	gcctcttctg	tgaagaagcc	atttggctctc	60
aggagcaaga	tgggcaagt	gtgctgccgt	tgcttcccct	gctgcaggga	gagcggcaag	120
agcaacgtgg	gcacttctgg	agaccacgac	gactctgcta	tgaagacact	caggagcaag	180
atgggcaagt	ggtgccgcca	ctgcttcccc	tgctgcagg	ggagtggcaa	gagcaacgtg	240
ggcgcttctg	gagaccacga	cgactctgct	atgaagacac	tcaggaacaa	gatgggcaag	300
tggtgctgcc	actgcttccc	ctgctgcagg	gggagcggca	agagcaaggt	ggcgcttgg	360
ggagactacg	atgacagtgc	cttcatggag	cccaggtacc	acgtccgtgg	agaagatctg	420
gacaagctcc	acagagctgc	ctggtggggg	aaagtcccca	gaaaggatct	catcgctcatg	480
ctcagggaca	ctgacgtgaa	caagaaggac	aagcaaaaga	ggactgctct	acatctggcc	540
tctgccaatg	ggaattcaga	agtagtaaaa	ctcctgctgg	acagacgatg	tcaacttaat	600
gtccttgaca	acaaaaagag	gacagctctg	ataaaggccg	tacaatgcc	ggaagatgaa	660
tgtgcgttaa	tggtgctgga	acatggcact	gatccaaata	ttccagatga	gtatggaaat	720
accactctgc	actacgctat	ctataatgaa	gataaattaa	tggccaaagc	actgctctta	780
tatggtgctg	atatcgaatc	aaaaaacaag	catggcctca	caccactggt	acttggtgta	840
catgagcaaa	aacagcaagt	cgtgaaattt	ttaatcaaga	aaaaagcgaa	tttaaatgca	900
ctggatagat	atggaaggac	tgctctcata	cttgctgtat	gttggtggatc	agcaagtata	960
gtcagccttc	tacttgagca	aaatattgat	gtatcttctc	aagatctatc	tggacagacg	1020
gccagagagt	atgctgtttc	tagtcatcat	catgtaattt	gccagttact	ttctgactac	1080
aaagaaaaac	agatgctaaa	aatctcttct	gaaaacagca	atccagaaca	agacttaaag	1140
ctgacatcag	aggaagagtc	acaaaagggtc	aaaggcagtg	aaaatagcca	gccagagaaa	1200
atgtctcaag	aaccagaaat	aaataaggat	ggtgatagag	aggttgaaga	agaaatgaag	1260
aagcatgaaa	gtaataatgt	gggattacta	gaaaacctga	ctaattggtg	cactgctggc	1320
aatggtgata	atggattaat	tcctcaaagg	aagagcagaa	cacctgaaaa	tcagcaattt	1380
cctgacaacg	aaagtgaaga	gtatcacaga	atttgcgaa	tagtttctga	ctacaaagaa	1440
aaacagatgc	caaaatactc	ttctgaaaac	agcaaccag	aacaagactt	aaagctgaca	1500
tcagaggaag	agtcacaaa	gcttgagggc	agtgaaaatg	gccagccaga	gctagaaaaat	1560
tttatggcta	tcgaagaaat	gaagaagcac	ggaagtactc	atgtcggatt	cccagaaaaac	1620
ctgactaatg	gtgccactgc	tggcaatggg	gatgatggat	taattcctcc	aagggaagagc	1680
agaacacctg	aaagccagca	atttcctgac	actgagaatg	aagagtatca	cagtgcagaa	1740
caaaatgata	ctcagaagca	attttgtgaa	gaacagaaca	ctggaatatt	acacgatgag	1800
attctgattc	atgaagaaaa	gcagatagaa	gtggttgaaa	aaatgaattc	tgagctttct	1860
cttagttgta	agaaagaaaa	agacatcttg	catgaaaata	gtacgttgcg	ggaagaaatt	1920
gcatgctaa	gactggagct	agacacaatg	aaacatcaga	gccagctaaa	aaaaaaaaaa	1980
aaaaaaaaaa	aaaaaaaaaa					2000

&lt;210&gt; 375

<211> 2040  
 <212> DNA  
 <213> Homo sapien

<400> 375

atggtggttg	aggttgattc	catgccggct	gcctcttctg	tgaagaagcc	atttggtctc	60
aggagcaaga	tgggcaagtg	gtgctgccgt	tgcttcccct	gctgcaggga	gagcggcaag	120
agcaacgtgg	gcacttctgg	agaccacgac	gactctgcta	tgaagacact	caggagcaag	180
atgggcaagt	ggtgccgcca	ctgcttcccc	tgctgcaggg	ggagtggcaa	gagcaacgtg	240
ggcgcttctg	gagaccacga	cgactctgct	atgaagacac	tcaggaacaa	gatgggcaag	300
tggtgctgcc	actgcttccc	ctgctgcagg	gggagcggga	agagcaagggt	gggcgcttgg	360
ggagactacg	atgacagtgc	cttcattggag	cccagggtacc	acgtccgtgg	agaagatctg	420
gacaagctcc	acagagctgc	ctggtggggg	aaagtcccca	gaaaggatct	catcgtcatg	480
ctcagggaca	ctgacgtgaa	caagaaggac	aagcaaaaga	ggactgctct	acatctggcc	540
tctgccaatg	ggaattcaga	agtagtaaaa	ctcctgctgg	acagacgatg	tcaacttaat	600
gtccttgaca	acaaaaagag	gacagctctg	ataaaggccg	tacaatgcca	ggaagatgaa	660
tgtgcggttaa	tggtgctgga	acatggcact	gatccaaata	ttccagatga	gtatggaaat	720
accactctgc	actacgctat	ctataatgaa	gataaattaa	tggccaaagc	actgctctta	780
tatggtgctg	atatcgaaatc	aaaaaacaag	catggcctca	caccactgtt	acttgctgta	840
catgagcaaa	aacagcaagt	cgtgaaattt	ttaatcaaga	aaaaagcgaa	tttaaatgca	900
ctggatagat	atggaaggac	tgctctcata	cttgctgtat	gttggtggatc	agcaagtata	960
gtcagccttc	tacttgagca	aaatattgat	gtatcttctc	aagatctatc	tggacagacg	1020
gccagagagt	atgctgtttc	tagtcatcat	catgtaattt	gccagttact	ttctgactac	1080
aaagaaaaac	agatgctaaa	aatctcttct	gaaaacagca	atccagaaca	agacttaaa	1140
ctgacatcag	aggaagagtc	acaaagggtc	aaaggcagtg	aaaatagcca	gccagagaaa	1200
atgtctcaag	aaccagaaat	aaataaggat	ggtgatagag	aggttgaaga	agaaatgaag	1260
aagcatgaaa	gtaataatgt	gggattacta	gaaaacctga	ctaattggtg	cactgctggc	1320
aatggtgata	atggattaat	tcctcaaagg	aagagcagaa	cacctgaaaa	tcagcaattt	1380
cctgacaacg	aaagtgaaga	gtatcacaga	atttgcgaat	tagtttctga	ctacaaagaa	1440
aaacagatgc	caaaatactc	ttctgaaaac	agcaacctcag	aacaagactt	aaagctgaca	1500
tcagaggaag	agtcacaaag	gcttgagggc	agtgaaaatg	gccagccaga	gaaaagatct	1560
caagaaccag	aaataataaa	ggatggtgat	agagagctag	aaaattttat	ggctatcgaa	1620
gaaatgaaga	agcacggaag	tactcatgtc	ggattcccag	aaaacctgac	taatggtgcc	1680
actgctggca	atggtgatga	tggattaatt	cctccaagga	agagcagaac	acctgaaagc	1740
cagcaatttc	ctgacactga	gaatgaagag	tatcacagt	acgaacaaaa	tgatactcag	1800
aagcaatttt	gtgaagaaca	gaacactgga	atattacacg	atgagattct	gattcatgaa	1860
gaaaagcaga	tagaagtggg	tgaaaaaatg	aattctgagc	tttctcttag	ttgtaagaaa	1920
gaaaaagaca	tcttgcatga	aaatagtacg	ttgcgggaag	aaattgccat	gctaagactg	1980
gagctagaca	caatgaaaca	tcagagccag	ctaaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	2040

<210> 376  
 <211> 329  
 <212> PRT  
 <213> Homo sapien

<400> 376

Met	Asp	Ile	Val	Val	Ser	Gly	Ser	His	Pro	Leu	Trp	Val	Asp	Ser	Phe
1				5					10					15	
Leu	His	Leu	Ala	Gly	Ser	Asp	Leu	Leu	Ser	Arg	Ser	Leu	Met	Ala	Glu
			20					25					30		
Glu	Tyr	Thr	Ile	Val	His	Ala	Ser	Phe	Ile	Ser	Cys	Ile	Ser	Ser	Ser
		35					40					45			
Leu	Asp	Gly	Gln	Gly	Glu	Arg	Gln	Glu	Gln	Arg	Gly	His	Phe	Trp	Arg
	50					55				60					
Pro	Gln	Arg	Leu	Leu	Cys	Glu	Asp	Ala	Trp	Glu	Gln	Glu	Val	Gln	Val
65					70				75					80	
Val	Leu	Pro	Leu	Leu	Pro	Leu	Leu	Gln	Gly	Ser	Gly	Lys	Ser	Asn	Val
			85					90						95	
Val	Ala	Trp	Gly	Asp	Tyr	Asp	Asp	Ser	Ala	Phe	Met	Asp	Pro	Arg	Tyr
			100					105					110		
His	Val	His	Gly	Glu	Asp	Leu	Asp	Lys	Leu	His	Arg	Ala	Ala	Trp	Trp
			115					120							

Gly Lys Val Pro Arg Lys Asp Leu Ile Val Met Leu Arg Asp Thr Asp  
 130 135 140  
 Val Asn Lys Arg Asp Lys Gln Lys Arg Thr Ala Leu His Leu Ala Ser  
 145 150 155 160  
 Ala Asn Gly Asn Ser Glu Val Val Lys Leu Val Leu Asp Arg Arg Cys  
 165 170 175  
 Gln Leu Asn Val Leu Asp Asn Lys Lys Arg Thr Ala Leu Thr Lys Ala  
 180 185 190  
 Val Gln Cys Gln Glu Asp Glu Cys Ala Leu Met Leu Leu Glu His Gly  
 195 200 205  
 Thr Asp Pro Asn Ile Pro Asp Glu Tyr Gly Asn Thr Thr Leu His Tyr  
 210 215 220  
 Ala Val Tyr Asn Glu Asp Lys Leu Met Ala Lys Ala Leu Leu Leu Tyr  
 225 230 235 240  
 Gly Ala Asp Ile Glu Ser Lys Asn Lys His Gly Leu Thr Pro Leu Leu  
 245 250 255  
 Leu Gly Ile His Glu Gln Lys Gln Gln Val Val Lys Phe Leu Ile Lys  
 260 265 270  
 Lys Lys Ala Asn Leu Asn Ala Leu Asp Arg Tyr Gly Arg Thr Ala Leu  
 275 280 285  
 Ile Leu Ala Val Cys Cys Gly Ser Ala Ser Ile Val Ser Pro Leu Leu  
 290 295 300  
 Glu Gln Asn Val Asp Val Ser Ser Gln Asp Leu Glu Arg Arg Pro Glu  
 305 310 315 320  
 Ser Met Leu Phe Leu Val Ile Ile Met  
 325

<210> 377  
 <211> 148  
 <212> PRT  
 <213> Homo sapien

<220>  
 <221> VARIANT  
 <222> (1)...(148)  
 <223> Xaa = Any Amino Acid

<400> 377  
 Met Thr Xaa Pro Ser Trp Ser Pro Gly Thr Thr Ser Val Glu Lys Ile  
 1 5 10 15  
 Trp Thr Ser Ser Thr Glu Leu Pro Trp Trp Gly Lys Val Pro Arg Lys  
 20 25 30  
 Asp Leu Ile Val Met Leu Arg Asp Thr Asp Val Asn Lys Xaa Asp Lys  
 35 40 45  
 Gln Lys Arg Thr Ala Leu His Leu Ala Ser Ala Asn Gly Asn Ser Glu  
 50 55 60  
 Val Val Lys Leu Xaa Leu Asp Arg Arg Cys Gln Leu Asn Val Leu Asp  
 65 70 75 80  
 Asn Lys Lys Arg Thr Ala Leu Xaa Lys Ala Val Gln Cys Gln Glu Asp  
 85 90 95  
 Glu Cys Ala Leu Met Leu Leu Glu His Gly Thr Asp Pro Asn Ile Pro  
 100 105 110  
 Asp Glu Tyr Gly Asn Thr Thr Leu His Tyr Ala Xaa Tyr Asn Glu Asp  
 115 120 125  
 Lys Leu Met Ala Lys Ala Leu Leu Leu Tyr Gly Ala Asp Ile Glu Ser  
 130 135 140  
 Lys Asn Lys Val  
 145

<210> 378  
 <211> 1719  
 <212> PRT

&lt;213&gt; Homo sapien

&lt;400&gt; 378

```

Met Val Val Glu Val Asp Ser Met Pro Ala Ala Ser Ser Val Lys Lys
 1      5      10
Pro Phe Gly Leu Arg Ser Lys Met Gly Lys Trp Cys Cys Arg Cys Phe
 20      25      30
Pro Cys Cys Arg Glu Ser Gly Lys Ser Asn Val Gly Thr Ser Gly Asp
 35      40      45
His Asp Asp Ser Ala Met Lys Thr Leu Arg Ser Lys Met Gly Lys Trp
 50      55      60
Cys Arg His Cys Phe Pro Cys Cys Arg Gly Ser Gly Lys Ser Asn Val
 65      70      75      80
Gly Ala Ser Gly Asp His Asp Asp Ser Ala Met Lys Thr Leu Arg Asn
 85      90      95
Lys Met Gly Lys Trp Cys Cys His Cys Phe Pro Cys Cys Arg Gly Ser
100      105      110
Gly Lys Ser Lys Val Gly Ala Trp Gly Asp Tyr Asp Asp Ser Ala Phe
115      120      125
Met Glu Pro Arg Tyr His Val Arg Gly Glu Asp Leu Asp Lys Leu His
130      135      140
Arg Ala Ala Trp Trp Gly Lys Val Pro Arg Lys Asp Leu Ile Val Met
145      150      155      160
Leu Arg Asp Thr Asp Val Asn Lys Lys Asp Lys Gln Lys Arg Thr Ala
165      170      175
Leu His Leu Ala Ser Ala Asn Gly Asn Ser Glu Val Val Lys Leu Leu
180      185      190
Leu Asp Arg Arg Cys Gln Leu Asn Val Leu Asp Asn Lys Lys Arg Thr
195      200      205
Ala Leu Ile Lys Ala Val Gln Cys Gln Glu Asp Glu Cys Ala Leu Met
210      215      220
Leu Leu Glu His Gly Thr Asp Pro Asn Ile Pro Asp Glu Tyr Gly Asn
225      230      235      240
Thr Thr Leu His Tyr Ala Ile Tyr Asn Glu Asp Lys Leu Met Ala Lys
245      250      255
Ala Leu Leu Leu Tyr Gly Ala Asp Ile Glu Ser Lys Asn Lys His Gly
260      265      270
Leu Thr Pro Leu Leu Leu Gly Val His Glu Gln Lys Gln Gln Val Val
275      280      285
Lys Phe Leu Ile Lys Lys Lys Ala Asn Leu Asn Ala Leu Asp Arg Tyr
290      295      300
Gly Arg Thr Ala Leu Ile Leu Ala Val Cys Cys Gly Ser Ala Ser Ile
305      310      315      320
Val Ser Leu Leu Leu Glu Gln Asn Ile Asp Val Ser Ser Gln Asp Leu
325      330      335
Ser Gly Gln Thr Ala Arg Glu Tyr Ala Val Ser Ser His His His Val
340      345      350
Ile Cys Gln Leu Leu Ser Asp Tyr Lys Glu Lys Gln Met Leu Lys Ile
355      360      365
Ser Ser Glu Asn Ser Asn Pro Glu Asn Val Ser Arg Thr Arg Asn Lys
370      375      380
Pro Arg Thr His Met Val Val Glu Val Asp Ser Met Pro Ala Ala Ser
385      390      395      400
Ser Val Lys Lys Pro Phe Gly Leu Arg Ser Lys Met Gly Lys Trp Cys
405      410      415
Cys Arg Cys Phe Pro Cys Cys Arg Glu Ser Gly Lys Ser Asn Val Gly
420      425      430
Thr Ser Gly Asp His Asp Asp Ser Ala Met Lys Thr Leu Arg Ser Lys
435      440      445
Met Gly Lys Trp Cys Arg His Cys Phe Pro Cys Cys Arg Gly Ser Gly
450      455      460
Lys Ser Asn Val Gly Ala Ser Gly Asp His Asp Asp Ser Ala Met Lys

```

465	Thr	Leu	Arg	Asn	Lys	Met	Gly	Lys	Trp	Cys	Cys	His	Cys	Phe	Pro	Cys
					485					490					495	
Cys	Arg	Gly	Ser	Gly	Lys	Ser	Lys	Val	Gly	Ala	Trp	Gly	Asp	Tyr	Asp	
			500					505					510			
Asp	Ser	Ala	Phe	Met	Glu	Pro	Arg	Tyr	His	Val	Arg	Gly	Glu	Asp	Leu	
		515					520					525				
Asp	Lys	Leu	His	Arg	Ala	Ala	Trp	Trp	Gly	Lys	Val	Pro	Arg	Lys	Asp	
	530				535						540					
Leu	Ile	Val	Met	Leu	Arg	Asp	Thr	Asp	Val	Asn	Lys	Lys	Asp	Lys	Gln	
545					550					555					560	
Lys	Arg	Thr	Ala	Leu	His	Leu	Ala	Ser	Ala	Asn	Gly	Asn	Ser	Glu	Val	
				565					570					575		
Val	Lys	Leu	Leu	Leu	Asp	Arg	Arg	Cys	Gln	Leu	Asn	Val	Leu	Asp	Asn	
			580					585				590				
Lys	Lys	Arg	Thr	Ala	Leu	Ile	Lys	Ala	Val	Gln	Cys	Gln	Glu	Asp	Glu	
		595					600					605				
Cys	Ala	Leu	Met	Leu	Leu	Glu	His	Gly	Thr	Asp	Pro	Asn	Ile	Pro	Asp	
	610					615					620					
Glu	Tyr	Gly	Asn	Thr	Thr	Leu	His	Tyr	Ala	Ile	Tyr	Asn	Glu	Asp	Lys	
625					630					635					640	
Leu	Met	Ala	Lys	Ala	Leu	Leu	Leu	Tyr	Gly	Ala	Asp	Ile	Glu	Ser	Lys	
				645					650						655	
Asn	Lys	His	Gly	Leu	Thr	Pro	Leu	Leu	Leu	Gly	Val	His	Glu	Gln	Lys	
			660					665						670		
Gln	Gln	Val	Val	Lys	Phe	Leu	Ile	Lys	Lys	Lys	Ala	Asn	Leu	Asn	Ala	
		675					680					685				
Leu	Asp	Arg	Tyr	Gly	Arg	Thr	Ala	Leu	Ile	Leu	Ala	Val	Cys	Cys	Gly	
	690					695					700					
Ser	Ala	Ser	Ile	Val	Ser	Leu	Leu	Leu	Glu	Gln	Asn	Ile	Asp	Val	Ser	
705					710					715					720	
Ser	Gln	Asp	Leu	Ser	Gly	Gln	Thr	Ala	Arg	Glu	Tyr	Ala	Val	Ser	Ser	
				725					730					735		
His	His	His	Val	Ile	Cys	Gln	Leu	Leu	Ser	Asp	Tyr	Lys	Glu	Lys	Gln	
			740					745						750		
Met	Leu	Lys	Ile	Ser	Ser	Glu	Asn	Ser	Asn	Pro	Glu	Gln	Asp	Leu	Lys	
		755					760						765			
Leu	Thr	Ser	Glu	Glu	Glu	Ser	Gln	Arg	Phe	Lys	Gly	Ser	Glu	Asn	Ser	
	770					775					780					
Gln	Pro	Glu	Lys	Met	Ser	Gln	Glu	Pro	Glu	Ile	Asn	Lys	Asp	Gly	Asp	
785					790					795					800	
Arg	Glu	Val	Glu	Glu	Glu	Met	Lys	Lys	His	Glu	Ser	Asn	Asn	Val	Gly	
				805					810						815	
Leu	Leu	Glu</														



965 970 975  
 Cys Glu Glu Gln Asn Thr Gly Ile Leu His Asp Glu Il Leu Ile His  
 980 985 990  
 Glu Glu Lys Gln Ile Glu Val Val Glu Lys Met Asn Ser Glu Leu Ser  
 995 1000 1005  
 Leu Ser Cys Lys Lys Glu Lys Asp Ile Leu His Glu Asn Ser Thr Leu  
 1010 1015 1020  
 Arg Glu Glu Ile Ala Met Leu Arg Leu Glu Leu Asp Thr Met Lys His  
 1025 1030 1035 104  
 Gln Ser Gln Leu Pro Arg Thr His Met Val Val Glu Val Asp Ser Met  
 1045 1050 1055  
 Pro Ala Ala Ser Ser Val Lys Lys Pro Phe Gly Leu Arg Ser Lys Met  
 1060 1065 1070  
 Gly Lys Trp Cys Cys Arg Cys Phe Pro Cys Cys Arg Glu Ser Gly Lys  
 1075 1080 1085  
 Ser Asn Val Gly Thr Ser Gly Asp His Asp Asp Ser Ala Met Lys Thr  
 1090 1095 1100  
 Leu Arg Ser Lys Met Gly Lys Trp Cys Arg His Cys Phe Pro Cys Cys  
 1105 1110 1115 112  
 Arg Gly Ser Gly Lys Ser Asn Val Gly Ala Ser Gly Asp His Asp Asp  
 1125 1130 1135  
 Ser Ala Met Lys Thr Leu Arg Asn Lys Met Gly Lys Trp Cys Cys His  
 1140 1145 1150  
 Cys Phe Pro Cys Cys Arg Gly Ser Gly Lys Ser Lys Val Gly Ala Trp  
 1155 1160 1165  
 Gly Asp Tyr Asp Asp Ser Ala Phe Met Glu Pro Arg Tyr His Val Arg  
 1170 1175 1180  
 Gly Glu Asp Leu Asp Lys Leu His Arg Ala Ala Trp Trp Gly Lys Val  
 1185 1190 1195 120  
 Pro Arg Lys Asp Leu Ile Val Met Leu Arg Asp Thr Asp Val Asn Lys  
 1205 1210 1215  
 Lys Asp Lys Gln Lys Arg Thr Ala Leu His Leu Ala Ser Ala Asn Gly  
 1220 1225 1230  
 Asn Ser Glu Val Val Lys Leu Leu Asp Arg Arg Cys Gln Leu Asn  
 1235 1240 1245  
 Val Leu Asp Asn Lys Lys Arg Thr Ala Leu Ile Lys Ala Val Gln Cys  
 1250 1255 1260  
 Gln Glu Asp Glu Cys Ala Leu Met Leu Leu Glu His Gly Thr Asp Pro  
 1265 1270 1275 128  
 Asn Ile Pro Asp Glu Tyr Gly Asn Thr Thr Leu His Tyr Ala Ile Tyr  
 1285 1290 1295  
 Asn Glu Asp Lys Leu Met Ala Lys Ala Leu Leu Leu Tyr Gly Ala Asp  
 1300 1305 1310  
 Ile Glu Ser Lys Asn Lys His Gly Leu Thr Pro Leu Leu Leu Gly Val  
 1315 1320 1325  
 His Glu Gln Lys Gln Gln Val Val Lys Phe Leu Ile Lys Lys Lys Ala  
 1330 1335 1340  
 Asn Leu Asn Ala Leu Asp Arg Tyr Gly Arg Thr Ala Leu Ile Leu Ala  
 1345 1350 1355 136  
 Val Cys Cys Gly Ser Ala Ser Ile Val Ser Leu Leu Leu Glu Gln Asn  
 1365 1370 1375  
 Ile Asp Val Ser Ser Gln Asp Leu Ser Gly Gln Thr Ala Arg Glu Tyr  
 1380 1385 1390  
 Ala Val Ser Ser His His His Val Ile Cys Gln Leu Leu Ser Asp Tyr  
 1395 1400 1405  
 Lys Glu Lys Gln Met Leu Lys Ile Ser Ser Glu Asn Ser Asn Pro Glu  
 1410 1415 1420  
 Gln Asp Leu Lys Leu Thr Ser Glu Glu Glu Ser Gln Arg Phe Lys Gly  
 1425 1430 1435 144  
 Ser Glu Asn Ser Gln Pro Glu Lys Met Ser Gln Glu Pro Glu Ile Asn  
 1445 1450 1455  
 Lys Asp Gly Asp Arg Glu Val Glu Glu Glu Met Lys Lys His Glu Ser

1460 1465 1470  
 Asn Asn Val Gly Leu Leu Glu Asn Leu Thr Asn Gly Val Thr Ala Gly  
 1475 1480 1485  
 Asn Gly Asp Asn Gly Leu Ile Pro Gln Arg Lys Ser Arg Thr Pro Glu  
 1490 1495 1500  
 Asn Gln Gln Phe Pro Asp Asn Glu Ser Glu Glu Tyr His Arg Ile Cys  
 1505 1510 1515 152  
 Glu Leu Val Ser Asp Tyr Lys Glu Lys Gln Met Pro Lys Tyr Ser Ser  
 1525 1530 1535  
 Glu Asn Ser Asn Pro Glu Gln Asp Leu Lys Leu Thr Ser Glu Glu Glu  
 1540 1545 1550  
 Ser Gln Arg Leu Glu Gly Ser Glu Asn Gly Gln Pro Glu Lys Arg Ser  
 1555 1560 1565  
 Gln Glu Pro Glu Ile Asn Lys Asp Gly Asp Arg Glu Leu Glu Asn Phe  
 1570 1575 1580  
 Met Ala Ile Glu Glu Met Lys Lys His Gly Ser Thr His Val Gly Phe  
 1585 1590 1595 160  
 Pro Glu Asn Leu Thr Asn Gly Ala Thr Ala Gly Asn Gly Asp Asp Gly  
 1605 1610 1615  
 Leu Ile Pro Pro Arg Lys Ser Arg Thr Pro Glu Ser Gln Gln Phe Pro  
 1620 1625 1630  
 Asp Thr Glu Asn Glu Glu Tyr His Ser Asp Glu Gln Asn Asp Thr Gln  
 1635 1640 1645  
 Lys Gln Phe Cys Glu Glu Gln Asn Thr Gly Ile Leu His Asp Glu Ile  
 1650 1655 1660  
 Leu Ile His Glu Glu Lys Gln Ile Glu Val Val Glu Lys Met Asn Ser  
 1665 1670 1675 168  
 Glu Leu Ser Leu Ser Cys Lys Lys Glu Lys Asp Ile Leu His Glu Asn  
 1685 1690 1695  
 Ser Thr Leu Arg Glu Glu Ile Ala Met Leu Arg Leu Glu Leu Asp Thr  
 1700 1705 1710  
 Met Lys His Gln Ser Gln Leu  
 1715

<210> 379  
 <211> 656  
 <212> PRT  
 <213> Homo sapien

<400> 379  
 Met Val Val Glu Val Asp Ser Met Pro Ala Ala Ser Ser Val Lys Lys  
 1 5 10 15  
 Pro Phe Gly Leu Arg Ser Lys Met Gly Lys Trp Cys Cys Arg Cys Phe  
 20 25 30  
 Pro Cys Cys Arg Glu Ser Gly Lys Ser Asn Val Gly Thr Ser Gly Asp  
 35 40 45  
 His Asp Asp Ser Ala Met Lys Thr Leu Arg Ser Lys Met Gly Lys Trp  
 50 55 60  
 Cys Arg His Cys Phe Pro Cys Cys Arg Gly Ser Gly Lys Ser Asn Val  
 65 70 75 80  
 Gly Ala Ser Gly Asp His Asp Asp Ser Ala Met Lys Thr Leu Arg Asn  
 85 90 95  
 Lys Met Gly Lys Trp Cys Cys His Cys Phe Pro Cys Cys Arg Gly Ser  
 100 105 110  
 Gly Lys Ser Lys Val Gly Ala Trp Gly Asp Tyr Asp Asp Ser Ala Phe  
 115 120 125  
 Met Glu Pro Arg Tyr His Val Arg Gly Glu Asp Leu Asp Lys Leu His  
 130 135 140  
 Arg Ala Ala Trp Trp Gly Lys Val Pro Arg Lys Asp Leu Ile Val Met  
 145 150 155 160  
 Leu Arg Asp Thr Asp Val Asn Lys Lys Asp Lys Gln Lys Arg Thr Ala  
 165 170 175

Leu His Leu Ala Ser Ala Asn Gly Asn Ser Glu Val Val Lys Leu Leu  
 180 185 190  
 Leu Asp Arg Arg Cys Gln Leu Asn Val Leu Asp Asn Lys Lys Arg Thr  
 195 200 205  
 Ala Leu Ile Lys Ala Val Gln Cys Gln Glu Asp Glu Cys Ala Leu Met  
 210 215 220  
 Leu Leu Glu His Gly Thr Asp Pro Asn Ile Pro Asp Glu Tyr Gly Asn  
 225 230 235 240  
 Thr Thr Leu His Tyr Ala Ile Tyr Asn Glu Asp Lys Leu Met Ala Lys  
 245 250 255  
 Ala Leu Leu Leu Tyr Gly Ala Asp Ile Glu Ser Lys Asn Lys His Gly  
 260 265 270  
 Leu Thr Pro Leu Leu Leu Gly Val His Glu Gln Lys Gln Gln Val Val  
 275 280 285  
 Lys Phe Leu Ile Lys Lys Lys Ala Asn Leu Asn Ala Leu Asp Arg Tyr  
 290 295 300  
 Gly Arg Thr Ala Leu Ile Leu Ala Val Cys Cys Gly Ser Ala Ser Ile  
 305 310 315 320  
 Val Ser Leu Leu Leu Glu Gln Asn Ile Asp Val Ser Ser Gln Asp Leu  
 325 330 335  
 Ser Gly Gln Thr Ala Arg Glu Tyr Ala Val Ser Ser His His His Val  
 340 345 350  
 Ile Cys Gln Leu Leu Ser Asp Tyr Lys Glu Lys Gln Met Leu Lys Ile  
 355 360 365  
 Ser Ser Glu Asn Ser Asn Pro Glu Gln Asp Leu Lys Leu Thr Ser Glu  
 370 375 380  
 Glu Glu Ser Gln Arg Phe Lys Gly Ser Glu Asn Ser Gln Pro Glu Lys  
 385 390 395 400  
 Met Ser Gln Glu Pro Glu Ile Asn Lys Asp Gly Asp Arg Glu Val Glu  
 405 410 415  
 Glu Glu Met Lys Lys His Glu Ser Asn Asn Val Gly Leu Leu Glu Asn  
 420 425 430  
 Leu Thr Asn Gly Val Thr Ala Gly Asn Gly Asp Asn Gly Leu Ile Pro  
 435 440 445  
 Gln Arg Lys Ser Arg Thr Pro Glu Asn Gln Gln Phe Pro Asp Asn Glu  
 450 455 460  
 Ser Glu Glu Tyr His Arg Ile Cys Glu Leu Val Ser Asp Tyr Lys Glu  
 465 470 475 480  
 Lys Gln Met Pro Lys Tyr Ser Ser Glu Asn Ser Asn Pro Glu Gln Asp  
 485 490 495  
 Leu Lys Leu Thr Ser Glu Glu Glu Ser Gln Arg Leu Glu Gly Ser Glu  
 500 505 510  
 Asn Gly Gln Pro Glu Leu Glu Asn Phe Met Ala Ile Glu Glu Met Lys  
 515 520 525  
 Lys His Gly Ser Thr His Val Gly Phe Pro Glu Asn Leu Thr Asn Gly  
 530 535 540  
 Ala Thr Ala Gly Asn Gly Asp Asp Gly Leu Ile Pro Pro Arg Lys Ser  
 545 550 555 560  
 Arg Thr Pro Glu Ser Gln Gln Phe Pro Asp Thr Glu Asn Glu Glu Tyr  
 565 570 575  
 His Ser Asp Glu Gln Asn Asp Thr Gln Lys Gln Phe Cys Glu Glu Gln  
 580 585 590  
 Asn Thr Gly Ile Leu His Asp Glu Ile Leu Ile His Glu Glu Lys Gln  
 595 600 605  
 Ile Glu Val Val Glu Lys Met Asn Ser Glu Leu Ser Leu Ser Cys Lys  
 610 615 620  
 Lys Glu Lys Asp Ile Leu His Glu Asn Ser Thr Leu Arg Glu Glu Ile  
 625 630 635 640  
 Ala Met Leu Arg Leu Glu Leu Asp Thr Met Lys His Gln S r Gln Leu  
 645 650 655

&lt;210&gt; 380

122

<211> 671  
 <212> PRT  
 <213> Homo sapien

<400> 380

Met	Val	Val	Glu	Val	Asp	Ser	Met	Pro	Ala	Ala	Ser	Ser	Val	Lys	Lys
1				5					10					15	
Pro	Phe	Gly	Leu	Arg	Ser	Lys	Met	Gly	Lys	Trp	Cys	Cys	Arg	Cys	Phe
			20					25					30		
Pro	Cys	Cys	Arg	Glu	Ser	Gly	Lys	Ser	Asn	Val	Gly	Thr	Ser	Gly	Asp
		35					40					45			
His	Asp	Asp	Ser	Ala	Met	Lys	Thr	Leu	Arg	Ser	Lys	Met	Gly	Lys	Trp
	50					55					60				
Cys	Arg	His	Cys	Phe	Pro	Cys	Cys	Arg	Gly	Ser	Gly	Lys	Ser	Asn	Val
65					70					75				80	
Gly	Ala	Ser	Gly	Asp	His	Asp	Asp	Ser	Ala	Met	Lys	Thr	Leu	Arg	Asn
				85					90					95	
Lys	Met	Gly	Lys	Trp	Cys	Cys	His	Cys	Phe	Pro	Cys	Cys	Arg	Gly	Ser
			100					105					110		
Gly	Lys	Ser	Lys	Val	Gly	Ala	Trp	Gly	Asp	Tyr	Asp	Asp	Ser	Ala	Phe
		115					120					125			
Met	Glu	Pro	Arg	Tyr	His	Val	Arg	Gly	Glu	Asp	Leu	Asp	Lys	Leu	His
	130					135					140				
Arg	Ala	Ala	Trp	Trp	Gly	Lys	Val	Pro	Arg	Lys	Asp	Leu	Ile	Val	Met
145					150					155					160
Leu	Arg	Asp	Thr	Asp	Val	Asn	Lys	Lys	Asp	Lys	Gln	Lys	Arg	Thr	Ala
				165					170					175	
Leu	His	Leu	Ala	Ser	Ala	Asn	Gly	Asn	Ser	Glu	Val	Val	Lys	Leu	Leu
		180						185					190		
Leu	Asp	Arg	Arg	Cys	Gln	Leu	Asn	Val	Leu	Asp	Asn	Lys	Lys	Arg	Thr
	195						200					205			
Ala	Leu	Ile	Lys	Ala	Val	Gln	Cys	Gln	Glu	Asp	Glu	Cys	Ala	Leu	Met
	210					215					220				
Leu	Leu	Glu	His	Gly	Thr	Asp	Pro	Asn	Ile	Pro	Asp	Glu	Tyr	Gly	Asn
225					230					235					240
Thr	Thr	Leu	His	Tyr	Ala	Ile	Tyr	Asn	Glu	Asp	Lys	Leu	Met	Ala	Lys
				245					250					255	
Ala	Leu	Leu	Leu	Tyr	Gly	Ala	Asp	Ile	Glu	Ser	Lys	Asn	Lys	His	Gly
		260						265					270		
Leu	Thr	Pro	Leu	Leu	Leu	Gly	Val	His	Glu	Gln	Lys	Gln	Gln	Val	Val
		275					280						285		
Lys	Phe	Leu	Ile	Lys	Lys	Lys	Ala	Asn	Leu	Asn	Ala	Leu	Asp	Arg	Tyr
	290					295					300				
Gly	Arg	Thr	Ala	Leu	Ile	Leu	Ala	Val	Cys	Cys	Gly	Ser	Ala	Ser	Ile
305					310					315					320
Val	Ser	Leu	Leu	Leu	Glu	Gln	Asn	Ile	Asp	Val	Ser	Ser	Gln	Asp	Leu
				325					330					335	
Ser	Gly	Gln	Thr	Ala	Arg	Glu	Tyr	Ala	Val	Ser	Ser	His	His	His	Val
				340				345					350		
Ile	Cys	Gln	Leu	Leu	Ser	Asp	Tyr	Lys	Glu	Lys	Gln	Met	Leu	Lys	Ile
	355						360					365			
Ser	Ser	Glu	Asn	Ser	Asn	Pro	Glu	Gln	Asp	Leu	Lys	Leu	Thr	Ser	Glu
	370					375					380				
Glu	Glu	Ser	Gln	Arg	Phe	Lys	Gly	Ser	Glu	Asn	Ser	Gln	Pro	Glu	Lys
385					390					395					400
Met	Ser	Gln	Glu	Pro	Glu	Ile	Asn	Lys	Asp	Gly	Asp	Arg	Glu	Val	Glu
				405					410					415	
Glu	Glu	Met	Lys	Lys	His	Glu	Ser	Asn	Asn	Val	Gly	Leu	Leu	Glu	Asn
			420					425					430		
Leu	Thr	Asn	Gly	Val	Thr	Ala	Gly	Asn	Gly	Asp	Asn	Gly	Leu	Ile	Pro
		435					440					445			
Gln	Arg	Lys	Ser	Arg	Thr	Pro	Glu	Asn	Gln	Gln	Phe	Pro	Asp	Asn	Glu

450		455		460
Ser Glu Glu Tyr His Arg Ile Cys Glu Leu Val Ser Asp Tyr Lys Glu				
465		470		475
Lys Gln Met Pro Lys Tyr Ser Ser Glu Asn Ser Asn Pro Glu Gln Asp				
	485		490	495
Leu Lys Leu Thr Ser Glu Glu Glu Ser Gln Arg Leu Glu Gly Ser Glu				
	500		505	510
Asn Gly Gln Pro Glu Lys Arg Ser Gln Glu Pro Glu Ile Asn Lys Asp				
	515		520	525
Gly Asp Arg Glu Leu Glu Asn Phe Met Ala Ile Glu Glu Met Lys Lys				
	530		535	540
His Gly Ser Thr His Val Gly Phe Pro Glu Asn Leu Thr Asn Gly Ala				
545		550		555
Thr Ala Gly Asn Gly Asp Asp Gly Leu Ile Pro Pro Arg Lys Ser Arg				
	565		570	575
Thr Pro Glu Ser Gln Gln Phe Pro Asp Thr Glu Asn Glu Glu Tyr His				
	580		585	590
Ser Asp Glu Gln Asn Asp Thr Gln Lys Gln Phe Cys Glu Glu Gln Asn				
	595		600	605
Thr Gly Ile Leu His Asp Glu Ile Leu Ile His Glu Glu Lys Gln Ile				
	610		615	620
Glu Val Val Glu Lys Met Asn Ser Glu Leu Ser Leu Ser Cys Lys Lys				
625		630		635
Glu Lys Asp Ile Leu His Glu Asn Ser Thr Leu Arg Glu Glu Ile Ala				
	645		650	655
Met Leu Arg Leu Glu Leu Asp Thr Met Lys His Gln Ser Gln Leu				
	660		665	670

<210> 381  
 <211> 251  
 <212> DNA  
 <213> Homo sapien

<400> 381	
ggagaagcgt ctgctggggc aggaaggggt ttccctgccc tctcacctgt ccctcaccaa	60
ggtaacatgc ttcccctaag ggtatcccaa cccaggggcc tcaccatgac ctctgagggg	120
ccaatatccc aggagaagca ttggggaggt gggggcaggt gaaggaccca ggactcacac	180
atcctggggc tccaaggcag aggagaggggt cctcaagaag gtcaggagga aaatccgtaa	240
caagcagtca g	251

<210> 382  
 <211> 3279  
 <212> DNA  
 <213> Homo sapiens

<400> 382	
cttcctgcag ccccatgct ggtgaggggc acgggcagga acagtggacc caacatggaa	60
atgctggagg gtgtcaggaa gtgatcgggc tctggggcag ggaggagggg tggggagtgt	120
cactgggagg ggacatcctg cagaaggtag gagtgcagaa acacccgctg caggggaggg	180
gagagccctg cggcacctgg gggagcagag ggagcagcac ctgcccaggc ctgggaggag	240
gggcctggag ggcgtgagga ggagcgaggg ggctgcatgg ctggagttag ggatcagggg	300
cagggcgcga gatggcctca cacagggaag agagggccccc tctgcaggg cctcacctgg	360
gccacaggag gacactgctt ttcctctgag gagtgcaggag ctgtggatgg tgctggacag	420
aagaaggaca gggcctggct caggtgtcca gaggtgtcg ctggcttccc tttgggatca	480
gactgcaggg agggagggcg gcagggttgt ggggggagtg acgatgagga tgacctgggg	540
gtggctccag gccttgcccc tgcctggggc ctcacccagc ctccctcaca gtctcctggc	600
cctcagtctc tcccctccac tccatcctcc atctggcctc agtgggtcat tctgatcact	660
gaactgacca taccagccc tgcccacggc cctccatggc tcccctaatgc cctggagagg	720
ggacatctag tcagagagta gtcctgaaga ggtggcctct gcgatgtgcc tgtgggggca	780
gcacctgca gatggtcccg gccctcatcc tgctgacctg tctgcaggga ctgtcctcct	840
ggaccttgcc ccttggtgag gagctggacc ctgaagtccc ctcccatag gccaagactg	900
gagccttggt cctctgtgtg gactccctgc ccatattctt gtgggagtgg gttctggaga	960

```

catttctgtc tgttctgag agctgggaat tgctctcagt catctgcctg cgcggttctg 1020
agagatggag ttgcctaggc agttattggg gccaatcttt ctactgtgt ctctctcct 1080
ttacccttag ggtgattctg ggggtccact tgtctgtaat ggtgtgcttc aaggatcac 1140
atcatggggc cctgagccat gtgccctgcc tgaaaagcct gctgtgtaca ccaaggtggt 1200
gcattaccgg aagtggatca aggacaccat cgcagccaac ccctgagtgc ccctgtocca 1260
cccctacctc tagtaaatTT aagtccacct cacgttctgg catcacttgg cctttctgga 1320
tgctggacac ctgaagcttg gaactcacct ggccgaagct cgagcctcct gagtccact 1380
gacctgtgct ttctgggttg gagtccaggg ctgctaggaa aaggaatggg cagacacagg 1440
tgtatgccaa tgtttctgaa atgggtataa ttctgtcctc tccttcggaa cactggctgt 1500
ctctgaagac ttctcgctca gtttcagtg ggacacacac aaagacgtgg gtgacctagt 1560
tgtttgggg gtgcagagat gggaggggtg gggcccaccc tggaagagtg gacagtgtac 1620
caaggtggac actctctaca gatcactgag gataagctgg agccacaatg catgaggcac 1680
acacacagca aggttgacgc tgtaaacata gccacgctg tcctgggggc actgggaagc 1740
ctagataagg ccgtgagcag aaagaagggg aggatcctcc tatgttgttg aaggagggac 1800
tagggggaga aactgaaagc tgattaatta caggaggttt gttcaggtcc cccaaaccac 1860
cgctcagattt gatgatttcc tagcaggact tacagaaata aagagctatc atgctgtggt 1920
ttattatggt ttgttacatt gataggatac atactgaaat cagcaaacaa aacagatgta 1980
tagattagag tgtggagaaa acagaggaaa acttgcagtt acgaagactg gcaacttggc 2040
tttactaagt tttcagactg gcaggaagtc aaacctatta ggctgaggac cttgtggagt 2100
gtagctgatac cagctgatag aggaactagc cagggtgggg cctttccctt tggatggggg 2160
gcatatccga cagttattct ctccaagtgg agacttacgg acagcatata attctccctg 2220
caaggtatga tgataatatg tacaagtaa ttccaactga ggaagctcac ctgataccta 2280
gtgtccaggc tttttactgg gggctgtgag gacgagtatg gagtacttga ataattgacc 2340
tgaagtcctc agacctgagg ttccctagag ttcaaacaga tacagcatgg tccagagtcc 2400
cagatgtaca aaaacaggga ttcatcacia atcccactct tagcatgaag ggtctggcat 2460
ggcccaaggc cccaagtata tcaaggcact tgggcagaa atgccaagga atcaaagtgc 2520
atctcccagg agttattcaa ggggtgagccc tttacttggg atgtacaggc tttgagcagt 2580
gcagggtctgc tgagtcaacc ttttattgta caggggatga gggaaaggga gaggatgagg 2640
aagccccctt ggggatttgg tttggtcttg tgatcagggt gtctatgggg ctatccctac 2700
aaagaagaat ccagaaatag gggcacattg aggaatgata ctgagcccaa agagcattca 2760
atcattgttt tatttgcctt cttttcacac cattgggtgag ggagggatta ccaccctggg 2820
gttatgaaga tggttgaaca cccacacacat agcaccggag atatgagatc aacagtttct 2880
tagccataga gattcacagc ccagagcagg aggacgctgc acaccatgca ggatgacatg 2940
ggggatgcgc tcgggatttg tgtgaagaag caaggactgt tagaggcagg ctttatagta 3000
acaagacggt ggggcaaact ctgatttccg tgggggaatg tcatggtctt gctttactaa 3060
gttttgagac tggcaggtag tgaaactcat taggctgaga accttgtgga atgcagctga 3120
cccagctgat agaggaaagta gccaggtggg agcctttccc agtgggtgtg ggacatatct 3180
ggcaagattt tgtggcactc ctggttacag atactggggc agcaaataaa actgaatctt 3240
gttttcagac cttaaaaaaa aaaaaaaaaa aaaagtttt 3279

```

&lt;210&gt; 383

&lt;211&gt; 155

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 383

```

Met Ala Gly Val Arg Asp Glr Gly Gln Gly Ala Arg Trp Pro His Thr
          5                                10                                15

```

```

Gly Lys Arg Gly Pro Leu Leu Gln Gly Leu Thr Trp Ala Thr Gly Gly
          20                                25                                30

```

```

His Cys Phe Ser Ser Glu Glu Ser Gly Ala Val Asp Gly Ala Gly Gln
          35                                40                                45

```

```

Lys Lys Asp Arg Ala Trp Leu Arg Cys Pro Glu Ala Val Ala Gly Phe
          50                                55                                60

```

```

Pro Leu Gly Ser Asp Cys Arg Glu Gly Gly Arg Gln Gly Cys Gly Gly
          65                                70                                75                                80

```

```

Ser Asp Asp Glu Asp Asp Leu Gly Val Ala Pro Gly Leu Ala Pro Ala

```

125

	85		90		95										
Trp	Ala	Leu	Thr	Gln	Pro	Pro	Ser	Gln	Ser	Pro	Gly	Pro	Gln	Ser	Leu
		100						105					110		
Pro	Ser	Thr	Pro	Ser	Ser	Ile	Trp	Pro	Gln	Trp	Val	Ile	Leu	Ile	Thr
		115					120					125			
Glu	Leu	Thr	Ile	Pro	Ser	Pro	Ala	His	Gly	Pro	Pro	Trp	Leu	Pro	Asn
	130					135					140				
Ala	Leu	Glu	Arg	Gly	His	Leu	Val	Arg	Glu						
145					150										

<210> 384  
 <211> 557  
 <212> DNA  
 <213> Homo sapiens

<400> 384  
 ggatcctcta gagcggccgc ctactactac taaattcgcg gccgcgtcga cgaagaagag 60  
 aaagatgtgt tttgttttgg actctctgtg gtcccttcca atgctgtggg tttccaacca 120  
 ggggaagggt cccttttgca ttgccaagtg ccataacct gagcactact ctaccatggt 180  
 tctgcctcct ggccaagcag gctggtttgc aagaatgaaa tgaatgattc tacagctagg 240  
 acttaacctt gaaatggaaa gtcttgcaat cccatttgca ggatccgtct gtgcacatgc 300  
 ctctgtagag agcagcattc ccagggacct tggaaacagt tggcactgta aggtgcttgc 360  
 tccccaaagac acatcctaaa aggtgttgta atggtgaaaa cgtcttcctt ctttattgcc 420  
 ccttcttatt tatgtgaaca actgtttgtc tttttttgta tcttttttaa actgtaaagt 480  
 tcaattgtga aaatgaatat catgcaaata aattatgcga ttttttttcc aaagtaaaaa 540  
 aaaaaaaaaa aaaaaaa 557

<210> 385  
 <211> 337  
 <212> DNA  
 <213> Homo sapiens

<400> 385  
 ttcccagggt atgtgcgagg gaagacacat ttactatcct tgatggggct gattccttta 60  
 gtttctctag cagcagatgg gttaggagga agtgacccaa gtggttgact cctatgtgca 120  
 tctcaagacc atctgctgtc ttcgagtacg gacacatcat cactcctgca ttgttgatca 180  
 aaacgtggag gtgcttttcc tcagctaaga agcccttagc aaaagctcga atagacttag 240  
 tatcagacag gtccagtttc cgcaccaaca cctgctggtt ccctgtcgtg gtctggatct 300  
 ctttgccac caattcccc tttccacat ccgcca 337

<210> 386  
 <211> 300  
 <212> DNA  
 <213> Homo sapiens

<400> 386  
 gggcccgtga ccggcccagg ccccgccctcg cgagtcctcc tccccgggtg cctgcccga 60  
 gccgcgtcgg ccagagggt gggcgcgggg ctgcctctac cggctggcgg ctgtaactca 120  
 gcgaccttgg cccgaaggct ctagcaagga cccaccgacc ccagccgagg cggcgggcggc 180  
 gcggactttg cccggtgtgt gggcgggagc ggactgcgtg tccgaggacg ggcagcgaag 240  
 atgttagcct tcgctgccag gaccgtggac cgatcccagg gctgtggtgt aacctcagcc 300

<210> 387  
 <211> 537  
 <212> DNA  
 <213> Homo sapiens

126

&lt;400&gt; 387

```

gggccgagtc gggcaccaag ggactctttg caggcttctt tctcggatc atcaaggctg 60
ccccctcctg tgccatcatg atcagcacct atgagttcgg caaaagcttc ttccagaggc 120
tgaaccagga ccggcttctg ggcggtgaa aggggcaagg aggcaaggac cccgtctctc 180
ccacggatgg ggagagggca ggaggagacc cagccaagtg ccttttctc agcactgagg 240
gagggggcctt gtttcccttc cctcccggcg acaagctcca gggcagggct gtccctctgg 300
gcggcccagc acttcctcag acacaacttc ttctgctgc tccagtcgtg gggatcatca 360
cttaccacc cccaagttc aagaccaa atctccagctg ccccttctg gtttccctgt 420
gtttgctgta gctgggcatg tctccaggaa ccaagaagcc ctgagcctgg tgtagtctcc 480
ctgacccttg ttaattcctt aagtctaaag atgatgaact tcaaaaaaaa aaaaaaa 537

```

&lt;210&gt; 388

&lt;211&gt; 520

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 388

```

aggataattt ttaaaccaat caaatgaaaa aaacaaacaa aaaaaaaagg aaatgtcatg 60
tgaggttaaa ccagtttgca ttccccta atgtgaaaaa taagaggact actcagcact 120
gtttgaagat tgctctctt acagcttctg agaattgtgt tatttcaact gccaaagtga 180
ggacccccct cccaacatgc ccagcccac ccctaagcat ggtcccttgt caccaggcaa 240
ccaggaaact gctacttgtg gacctacca gagaccagga gggtttggt agctcacagg 300
acttccccca cccagaaga ttagcatccc atactagact catactcaac tcaactaggc 360
tcatactcaa ttgatgggta ttagacaatt ccatttctt ctggttatta taaacagaaa 420
atctttcttc ttctcattac cagtaaaggc tcttggtatc tttctgttgg aatgatttct 480
atgaacttgt cttattttta tgggtgggtt ttttctggt 520

```

&lt;210&gt; 389

&lt;211&gt; 365

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 389

```

cggtgcccc gtttgacaga aggaaaggcg gagcttattc aaagtctaga gggagtggag 60
gagttaaggc tggatttcag atctgcctgg ttccagccgc agtgtgccct ctgctcccc 120
aacgactttc caaataatct caccagcgcc ttccagctca ggcgtcctag aagcgtcttg 180
aagcctatgg ccagctgtct ttgtgttccc tctcaccgc ctgtcctcac agctgagact 240
cccaggaaac cttcagacta ccttctctg ccttcagcaa ggggcgttgc ccacattctc 300
tgaggggtcag tggaagaacc tagactccca ttgctagagg tagaaagggg aagggtgctg 360
gggag 365

```

&lt;210&gt; 390

&lt;211&gt; 221

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(221)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 390

```

tgctcttcca tcttgcccc gacttctctg tcaggaaagt ggggatggac cccatctgca 60
tacacggntt ctcatgggtg tggaacatct ctgcttgagg tttcaggaag gcctctggct 120
gctctangag tctgancnga ntcgttgccc cantntgaca naaggaaagg cggagcttat 180
tcaaagtcta gagggagtgg aggagttaag gctggatttc a 221

```

&lt;210&gt; 391

&lt;211&gt; 325

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens



<220>  
 <221> misc\_feature  
 <222> (1)...(325)  
 <223> n = A,T,C or G

<400> 391  
 tggagcaggt cccgaggcct ccctagagcc tggggccgac tctgtgncga tgcangcttt 60  
 ctctcgcgcc cagcctggag ctgctcctgg catctaccaa caatcagncg aggcgagcag 120  
 tagccagggc actgctgcca acagccagtc cnnataccat catgtnaccc ggtgngctct 180  
 naanttngat ntccanagcc ctacccatcn tagttctgct ctcccaccgg ntaccagccc 240  
 cactgcccag gaatcctaca gccagtaccc tgtcccgacg tctctaccta ccagtacgat 300  
 gagacctccg gctactacta tgacc 325

<210> 392  
 <211> 277  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(277)  
 <223> n = A,T,C or G

<400> 392  
 atattgttta actccttcct ttatatcttt taacattttc atggngaaag gttcacatct 60  
 agtctcactt nggcnagnn ctctacttg agtctcttcc cgggctggn ccagtngnaa 120  
 antaccanga accgncatgn cttanaaach ncctggtttn tgggttnntc aatgactgca 180  
 tgcagtgcac caccctgtcc actacgtgat gctgtaggat taaagtctca cagtgggcgg 240  
 ctgaggatac agcgccgcgt cctgtgttgc tggggaa 277

<210> 393  
 <211> 566  
 <212> DNA  
 <213> Homo sapiens

<400> 393  
 actagtccag tgtggtggaa ttgcgggccg cgtcgacgga caggtcagct gtctggctca 60  
 gtgatctaca ttctgaagtt gtctgaaaat gtcttcatga ttaaattcag cctaaacgtt 120  
 ttgccgggaa cactgcagag acaatgctgt gagtttccaa ccttagccca tctgcgggca 180  
 gagaaggtct agtttgtcca tcagcattat catgatatac ggactgggta cttgggttaag 240  
 gagggtctta ggagatctgt cctttttaga gacaccttac ttataatgaa gtatttggga 300  
 ggttggtttt caaaagtaga aatgtcctgt attccgatga tcatcctgta aacattttat 360  
 catttattaa tcatccctgc ctgtgtctat tattatattc atatctctac gctggaaact 420  
 ttctgcctca atgtttactg tgcctttgtt tttgctagtt tgtgttggtg aaaaaaaaaa 480  
 cattctctgc ctgagtttta atttttgtcc aaagttattt taatctatac aattaaaagc 540  
 ttttgcctat caaaaaaaaa aaaaaa 566

<210> 394  
 <211> 384  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(384)  
 <223> n = A,T,C or G

<400> 394  
 gaacatacat gtcccgccac ctgagctgca gtctgacatc atcgccatca cgggcctcgc 60  
 tgcaaatng gaccgggcca aggctggact gctggagcgt gtgaaggagc tacaggccna 120  
 gcaggaggac cgggctttta ggagttttta gctgagtgtc actgtagacc ccaaatacca 180  
 tccaagatt atcgggagaa agggggcagt aattacccaa atccggttgg agcatgacgt 240

gaacatccag tttcctgata aggacgatgg gaaccagccc caggaccaaa ttaccatcac 300  
 aggggtacgaa aagaacacag aagctgccag ggatgctata ctgagaattg tgggtgaact 360  
 tgagcagatg gtttctgagg acgt 384

<210> 395

<211> 399

<212> DNA

<213> Homo sapiens

<400> 395

ggcaaaactg tgtgacctca ataagacctc gcagatccaa ggtcaagtat cagaagtgc 60  
 tctgaccttg gactccaaga cctacatcaa cagcctggct atattagatg atgagccagt 120  
 tatcagaggt ttcattcattg cggaaattgt ggagtctaag gaaatcatgg cctctgaagt 180  
 attcacgtct ttcagtagc ctgagttctc tatagagttg cctaacacag gcagaattgg 240  
 ccagctactt gtctgcaatt gtatcttcaa gaataccctg gccatccctt tgactgacgt 300  
 caagttctct ttggaaagcc tgggcatctc ctactacag acctctgacc atgggacgg 360  
 gcagcctggt gagaccatcc aatcccaaat aaaatgcac 399

<210> 396

<211> 403

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)...(403)

<223> n = A,T,C or G

<400> 396

tggagttntc agtgcaaaca agccataaag cttcagtagc aaattactgt ctcacagaaa 60  
 gacattttca acttctgctc cagctgctga taaaacaaat catgtgttta gcttgactcc 120  
 agacaaggac aacctgttcc ttcataactc tctagagaaa aaaaggagtt gttagtagat 180  
 actaaaaaaa gtggatgaat aatctggata tttttcctaa aaagattcct tgaaacacat 240  
 taggaaaatg gagggcctta tgatcagaat gctagaatta gtccattgtg ctgaagcagg 300  
 gtttagggga gggagtgagg gataaaaaga ggaaaaaaag aagagtgaga aaacctattt 360  
 atcaaagcag gtgctatcac tcaatgttag gccctgctct ttt 403

<210> 397

<211> 100

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)...(100)

<223> n = A,T,C or G

<400> 397

actagtnacg tgtgggtggaa ttgcgggccc cgctgacctc naanccatct ctatagcaaa 60  
 tccatccccg ctctggttg gtnacagaat gactgacaaa 100

<210> 398

<211> 278

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)...(278)

<223> n = A,T,C or G

<400> 398

WO 01/25272

129

```

gcggccgcgt cgacagcagt tccgccagcg ctgcgccctg ggtggggatg tgctgcacgc 60
ccacctggac atctggaagt cagcggcctg gatgaaagag cggacttcac ctggggcgat 120
tcactactgt gcctcgacca gtgaggagag ctggaccgac agcgagggtg actcatcatg 180
ctccgggcag cccatccacc tgtggcagtt cctcaaggag ttgctactca agccccacag 240
ctatggccgc ttcattangt ggctcaacaa ggagaagg 278

```

&lt;210&gt; 399

&lt;211&gt; 298

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(298)

&lt;223&gt; n = A,T,C or G

```

<400> 399
acggagggtg aggaagcgnc cctgggatcg anaggatggg tcctgncatt gaccnccctn 60
ggggtgccng catggagcgc atgggcgcgg gcctggggcca cggcatggat cgctggggct 120
ccgagatcga gcgcatgggc ctgggtcatgg accgcatggg ctccgtggag cgcatgggct 180
ccggcattga gcgcatgggc ccgctgggccc tcgaccacat ggccctccanc attgancgca 240
tgggccagac catggagcgc attggctctg gcgtggagcn catgggtgcc ggcatggg 298

```

&lt;210&gt; 400

&lt;211&gt; 548

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

```

<400> 400
acatcaacta cttcctcatt ttaaggtatg gcagttccct tcctcccctt ttctgcctt 60
gtacatgtac atgtatgaaa ttctcttctc ttaccgaact ctctccacac atcacaaggt 120
caaaagaacca cagccttaga agggtaagag ggcaccctat gaaatgaaat ggtgatttct 180
tgagtctctt ttttccacgt ttaaggggccc atggcaggac ttagagttgc gagttaagac 240
tgcagagggc tagagaatta ttcatacag gctttgaggc caccatgtc acttatcccg 300
tataccctct caccatcccc ttgtctactc tgatgcccc aagatgcaac tgggcagcta 360
gttggcccca taattctggg cctttgttgt ttgttttaac tacttgggca tcccaggaag 420
ctttccagtg atctctacc atgggcccc ctctctggat caagccccct ccaggccctg 480
tccccagccc ctctgcccc agcccacccc cttgccttgg tgctcagccc tcccattggg 540
agcaggtt

```

&lt;210&gt; 401

&lt;211&gt; 355

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(355)

&lt;223&gt; n = A,T,C or G

```

<400> 401
actgtttcca tggtagttt ctacacattg ctacctcagt gctcctggaa acttagcttt 60
tgatgtctcc aagtagtcca ccttcattta actctttgaa actgtatcat ctttgccaag 120
taagagtggg ggcctatttc agctgctttg acaaaatgac tggctcctga ctttaacgttc 180
tataaatgaa tgtgctgaag caaagtggcc atggtgccgg cgaagaagan aaagatgtgt 240
tttgttttgg actctctgtg gtcccttcca atgctgnngg tttccaacca ggggaagggt 300
cccttttgca ttgccaagtg ccataaccat gaggactact ctaccatggn tctgc 355

```

&lt;210&gt; 402

&lt;211&gt; 407

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(407)  
 <223> n = A,T,C or G

<400> 402  
 atggggcaag ctggataaag aaccaagacc cactggagta tgctgtcttc aagaaaccca 60  
 tctcacatgc ggtggcatac atagggtcaa aataaaggaa tggagaaaaa tatttcaagc 120  
 aaatggaaaa cagaaaaaag caggtgttgc actcctactt tctgacaaaa cagactatgc 180  
 gaataaagat aaaaaagaga aggacattac aaaggtggtc ctgacctttg ataaatctca 240  
 ttgcttgata ccaacctggg ctgttttaat tgcccaaacc aaaaggataa tttgctgagg 300  
 ttgtggagct tctcccctgc agagagtccc tgatctccca aaatttggtt gagatgtaag 360  
 gntgattttg ctgacaactc cttttctgaa gttttactca tttccaa 407

<210> 403  
 <211> 303  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(303)  
 <223> n = A,T,C or G

<400> 403  
 cagtatttat agccnaactg aaaagctagt agcaggcaag tctcaaattcc aggcacccaa 60  
 tcttaagcaa gagccatggc atggtgaaaa tgcaaaaggaa gagtctggcc aatctacaaa 120  
 tagagaacaa gacctactca gtcatgaaca aaaaggcaga caccaacatg gatctcatgg 180  
 gggattggat attgtaatta tagagcagga agatgacagt gatcgtcatt tggcacaaca 240  
 tcttaacaac gaccgaaacc cattatttac ataaacctcc attcggtaac catgttgaaa 300  
 gga 303

<210> 404  
 <211> 225  
 <212> DNA  
 <213> Homo sapiens

<400> 404  
 aagtgttaact tttaaaaatt tagtggattt tgaaaattct tagaggaaag taaaggaaaa 60  
 attgttaatg cactcattta cctttacatg gtgaaagttc tctcttgatc ctacaaacag 120  
 acattttcca ctctgtgttc catagtgtgt aagtgtatca gatgtgttgg gcatgtgaat 180  
 ctccaagtgc ctgtgtaata aataaagtat ctttatttca ttcatt 225

<210> 405  
 <211> 334  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(334)  
 <223> n = A,T,C or G

<400> 405  
 gagctgttat actgtgagtt ctactaggaa atcatcaaat ctgagggttg tctggaggac 60  
 ttcaatacac ctccccccat agtgaatcag cttccagggg gtccagtccc tctccttact 120  
 tcatccccat cccatgccaa aggaagaccc tccctccttg gtcacagcc ttctctaggc 180  
 ttcccagtgc ctccaggaca gagtgggtta tgttttcagc tccatccttg ctgtgagtgt 240  
 ctggtgcggt tgtgctcca gcttctgctc agtgcttcat ggacagtgtc cagcccatgt 300  
 cactctccac tctctcanng tggatccac ccct 334

<210> 406  
 <211> 216  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(216)  
 <223> n = A,T,C or G

<400> 406  
 ttctacacct aatgagggag ttganatnac atnnaaccag gaaatgcatg gatctcaang 60  
 gaaacaaaca cccaataaac tcggagtggc agactgacaa ctgtgagaca tgcacttgct 120  
 acnaaacaca aatttnatgt tgcacccttg tttctacacc tgtgggttat gacaaagaca 180  
 actgccaaag aatnttcaag aaggaggact gccant 216

<210> 407  
 <211> 413  
 <212> DNA  
 <213> Homo sapiens

<400> 407  
 gctgacttgc tagtâtcatc tgcattcatt gaagcacaag aacttcacgc cttgactcat 60  
 gtaaatgcaa taggattaaa aaataaattt gatatcacat ggaaacagac aaaaaatatt 120  
 gtacaacatt gcacccagtg tcagattcta cacctggcca ctcaggaagc aagagttaat 180  
 cccagaggtc tatgtcctaa tgtgttatgg caaatggatg tcatgcacgt accttcattt 240  
 ggaaaattgt cattttgtcca tgtgacagtt gatacttatt cacatttcac atgggcaacc 300  
 tgccagacag gagaaaagtct tcccatgtta aaagacattt attatcttgt tttcctgtca 360  
 tgggagttcc agaaaaagtt aaaacagaca atggggccagg ttctgtagta aag 413

<210> 408  
 <211> 183  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(183)  
 <223> n = A,T,C or G

<400> 408  
 ggagctngcc ctcaattcct ccatntctat gttancatat ttaatgtctt ttgnnattaa 60  
 tncctaacta gttaatcctt aaagggctan ntaatcctta actagtcctt ccattgtgag 120  
 cattatcctt ccagtattcn ccttctnttt tatttactcc ttcttggtta cccatgtact 180  
 ntt 183

<210> 409  
 <211> 250  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(250)  
 <223> n = A,T,C or G

<400> 409  
 cccacgcatg ataagctctt tatttctgta agtctctgta ggaaatcatc aaatctgacg 60  
 gtgggtttggg ggacctgaac aaacctcctg taattaatca gctttcagtt tctcccccta 120  
 gtccctcctt caacaacata ggaggatcct ccccttcttt ctgtctacgg ccttatctag 180  
 gcttcccagt gccccagga cagcgtgggc tatgtttaca gcgcntcctt gctggggggg 240  
 ggccntatgc 250

<210> 410  
 <211> 306  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(306)  
 <223> n = A,T,C or G

<400> 410  
 ggctggtttg caagaatgaa atgaatgatt ctacagctag gacttaacct tgaaatggaa 60  
 agtcttgcaa tcccatttgc aggatccgtc tgtgcacatg cctctgtaga gagcagcatt 120  
 cccaggggacc ttggaaacag ttggcactgt aagggtgcttg ctccccaaga cacatcctaa 180  
 aagggtgttgt aatgggtgaaa accgcttcct tctttattgc cccttcttat ttatgtgaac 240  
 nactggttgg ctttttttgn atctttttta aactggaaag ttcaattgng aaaatgaata 300  
 tcntgc 306

<210> 411  
 <211> 261  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(261)  
 <223> n = A,T,C or G

<400> 411  
 agagatattn cttaggtnaa agttcataga gttcccatga actatatgac tggccacaca 60  
 ggatcttttg tatttaagga ttctgagatt ttgcttgagc aggattagat aaggctgttc 120  
 tttaaatgtc tgaaatggaa cagattttcaa aaaaaaaccc cacaatctag ggtgggaaca 180  
 aggaaggaaa gatgtgaata ggctgatggg caaaaaacca attaccat cagttccagc 240  
 cttctctcaa gngagggcaa a 261

<210> 412  
 <211> 241  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(241)  
 <223> n = A,T,C or G

<400> 412  
 gttcaatggtt acctgacatt tctacaacac ccactcacc gatgtattcg ttgcccagtg 60  
 ggaacatacc agcctgaatt tggaaaaaat aattgtgttt cttgcccagg aaatactacg 120  
 actgactttg atggctccac aaacataacc cagtgtaaaa acagaagatg tggaggggag 180  
 ctgggagatt tcactgggta cattgaattc caaactacc cangcaatta cccagccaac 240  
 a 241

<210> 413  
 <211> 231  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(231)  
 <223> n = A,T,C or G

<400> 413  
aactcttaca atccaagtga ctcatctgtg tgcttgaatc ctttccactg tctcatctcc 60  
ctcatccaag tttctagtac cttctctttg ttgtgaagga taatcaaact gaacaacaaa 120  
aagtttactc tcctcatttg gaacctaaaa actctcttct tcctgggtct gagggctcca 180  
agaatccttg aatcanttct cagatcattg gggacaccan atcaggaacc t 231

<210> 414  
<211> 234  
<212> DNA  
<213> Homo sapiens

<400> 414  
actgtccatg aagcactgag cagaagctgg aggcacaacg caccagacac tcacagcaag 60  
gatggagctg aaaacataac ccactctgtc ctggaggcac tgggaagcct agagaaggct 120  
gtgagccaag gagggagggt cttccttttg catgggatgg ggatgaagta aggagaggga 180  
ctggaccccc tggaagctga ttcactatgg ggggaggtgt attgaagtcc tcca 234

<210> 415  
<211> 217  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(217)  
<223> n = A,T,C or G

<400> 415  
gcataggatt aagactgagt atcttttcta cattctttta acttttctaag gggcacttct 60  
caaaacacag accaggtagc aaatctccac tgctctaagg ntctcaccac cactttctca 120  
cacctagcaa tagtagaatt cagtcctact tctgaggcca gaagaatggt tcagaaaaat 180  
antggattat aaaaaataac aattaagaaa aataatc 217

<210> 416  
<211> 213  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(213)  
<223> n = A,T,C or G

<400> 416  
atgcataatnt aaagganact gcctcgcttt tagaagacat ctggnetgct ctctgcatga 60  
ggcacagcag taaagctctt tgattcccag aatcaagaac tctccccttc agactattac 120  
cgaatgcaag gtggttaatt gaaggccact aattgatgct caaatagaag gatattgact 180  
atattggaac agatggagtc tctactacaa aag 213

<210> 417  
<211> 303  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(303)  
<223> n = A,T,C or G

<400> 417  
nagtcttcag gccatcagg gaagttcaca ctggagagaa gtcatacata tgtactgtat 60

```

gtgggaaagg ctttactctg agttcaaato ttcaagccca tcagagagtc cacactggag 120
agaagccata caaatgcaat gagtgtggga agagcttcag gagggattcc cattatcaag 180
ttcatctagt ggtccacaca ggagagaaac cctataaatg tgagatatgt gggaagggct 240
tcantcaaag ttcgtatctt caaatccatc ngaagggncca cagtatanan aaacctttta 300
agt 303

```

```

<210> 418
<211> 328
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(328)
<223> n = A,T,C or G

```

```

<400> 418
tttttggcgg tgggtggggca gggacggggac angagtctca ctctgttgcc caggctggag 60
tgcacaggca tgatctcggc tcaactacaac ccctgcctcc catgtccaag cgattcttgt 120
gcctcagcct tccctgtagc tagaattaca ggcacatgcc accacaccca gctagttttt 180
gtatttttag tagagacagg gtttcaccat gttggccagg ctggtctcaa actcctnacc 240
tcagnggtca ggctggtctc aaactcctga cctcaagtga tctgcccacc tcagcctccc 300
aaagtgctan gattacaggc cgtgagcc 328

```

```

<210> 419
<211> 389
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)...(389)
<223> n = A,T,C or G

```

```

<400> 419
cctcctcaag acggcctgtg gtccgcctcc cggcaaccaa gaagcctgca gtgccatatg 60
acccctgagc catggactgg agcctgaaag gcagcgtaca ccctgctcct gatcttgctg 120
cttgtttcct ctctgtggct ccattcatag cacagttgtt gcaactgaggc ttgtgcaggc 180
cgagcaaggc caagctggct caaagagcaa ccagtcaact ctgccacggg gtgccaggca 240
ccggttctcc agccaccaac ctcaactcgt cccgcaaagt gcacatcagt tcttctacce 300
taaaggtagg accaaagggc atctgctttt ctgaagtctt ctgctctatc agccatcacg 360
tggcagccac tcnngctgtg tcgacggcg 389

```

```

<210> 420
<211> 408
<212> DNA
<213> Homo sapiens

```

```

<400> 420
gttcctccta actcctgcca gaaacagctc tcctcaacat gagagctgca cccctcctcc 60
tggccagggc agcaagcctt agccttggct tcttgtttct gctttttttc tggctagacc 120
gaagtgtact agccaaggag ttgaagtttg tgactttggg gtttcggcat ggagaccgaa 180
gtccattga cacctttccc actgacccca taaaggaatc ctcatggcca caaggatttg 240
gccaactcac ccagctgggc atggagcagc attatgaact tggagagtat ataagaaaga 300
gatatagaaa attcttgaat gagtcctata aacatgaaca ggtttatatt cgaagcacag 360
acgttgaccg gactttgatg aagtgcctatg acaaacctgg caagcccc 408

```

```

<210> 421
<211> 352
<212> DNA
<213> Homo sapiens

```



<220>  
 <221> misc\_feature  
 <222> (1)...(352)  
 <223> n = A,T,C or G

<400> 421  
 gctcaaaaat ctttttactg atnggcatgg ctacacaatc attgactatt acggaggcca 60  
 gaggagaatg aggcctggcc tgggagccct gtgcctacta naagcacatt agattatcca 120  
 ttcactgaca gaacagggtct tttttgggtc cttcttctcc accacnatac acttgacgtc 180  
 ctccttcttg aagattcttt ggcagttgtc tttgtcataa cccacagggtg tagaaacaag 240  
 ggtgcaacat gaaatttctg tttcgtagca agtgcattgc tcacaagttg gcangtctgc 300  
 cactccgagt ttattgggtg tttgtttcct ttgagatcca tgcatttcct gg 352

<210> 422  
 <211> 337  
 <212> DNA  
 <213> Homo sapiens

<400> 422  
 atgccaccat gctggcaatg cagcggggcg tccaaggcct gcataatccag cccaagctgg 60  
 cgatgatcga cggcaaccgt tgcccgaagt tgccgatgcc agccgaagcg gtggtcaagg 120  
 gcgatagcaa ggtgccggcg atcgccggcg cgtcaatcct ggccaagggtc agccgtgatc 180  
 gtgaaatggc agctgtcgaa ttgatctacc cgggttatgg catcggcggg cataagggtc 240  
 atccgacacc ggtgcacctg gaagccttgc agcggctggg gccgacgccg attcaccgac 300  
 gcttcttccg ccggtacggc tggcctatga aaattat 337

<210> 423  
 <211> 310  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(310)  
 <223> n = A,T,C or G

<400> 423  
 gctcaaaaat ctttttactg atatggcatg gctacacaat cattgactat tagaggccag 60  
 aggagaatga ggcctggcct gggagccctg tgcctactan aagcncatta gattatccat 120  
 tcaactgacag aacagggtctt ttttgggtcc ttcttctcca ccacgatata cttgcagtc 180  
 tccttcttga agattctttg gcagttgtct ttgtcataac ccacagggtg anaaacaagg 240  
 gtgcaacatg aaatttctgt ttcgtagcaa gtgcatgtct cacagttgtc aagtctgccc 300  
 tccgagttta 310

<210> 424  
 <211> 370  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(370)  
 <223> n = A,T,C or G

<400> 424  
 gctcaaaaat ctttttactg ataggcatgg ctacacaatc attgactatt agaggccaga 60  
 ggagaatgag gcctggcctg ggagccctgt gcctactaga agcacattag attatccatt 120  
 cactgacaga acagggtctt tttgggtcct tcttctccac cacgatatac ttgcagtcct 180  
 ccttcttgaa gattcttttg cagttgtctt tgctataacc cacagggtga gaaacatcct 240  
 ggttgaatct cctggaactc cctcattagg tatgaaatag catgatgcat tgcataaagt 300  
 cacgaagggtg gcaaagatca caacgctgcc cagganaaca ttcattgtga taagcaggac 360  
 tccgtcgacg 370

136

<210> 425  
 <211> 216  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(216)  
 <223> n = A,T,C or G

<400> 425  
 aattgctatn ntttattttg ccactcaaaa taattaccaa aaaaaaaaaa tnttaaata 60  
 taacaacnca acatcaaggn aaananaaca ggaatggntg actntgcata aatnggccga 120  
 anattatcca ttatnttaag gggtgacttc aggntacagc acacagacaa acatgcccag 180  
 gaggnntntca ggaccgctcg atgtntntng aggagg 216

<210> 426  
 <211> 596  
 <212> DNA  
 <213> Homo sapiens

<400> 426  
 cttccagtga ggataaccct gttgccccgg gccgagggttc tccattaggc tctgattgat 60  
 tggcagtcag tgatggaagg gtgttctgat cattccgact gccccaaggg tcgctggcca 120  
 gctctctgtt ttgctgagtt ggcagtagga cctaatttgt taattaagag tagatgggtga 180  
 gctgtccttg tattttgatt aacctaattg ccttcccagc acgactcgga ttcagctgga 240  
 gacatcacgg caacttttaa tgaaatgatt tgaagggccca ttaagaggca cttcccgtta 300  
 ttaggcagtt catctgcact gataacttct tggcagctga gctggtcgga gctgtggccc 360  
 aaacgcacac ttggcctttg gttttgagat acaactctta atcttttagt catgcttgag 420  
 ggtggatggc cttttcagct ttaacccaat ttgcactgcc ttggaagtgt agccaggaga 480  
 atacactcat atactcgtgg gcttagaggc cacagcagat gtcattggtc tactgcctga 540  
 gtcccgtctg tcccatccca ggaccttcca tcggcgagta cctgggagcc cgtgct 596

<210> 427  
 <211> 107  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(107)  
 <223> n = A,T,C or G

<400> 427  
 gaagaattca agttaggttt attcaaaggg cttacngaga atcctanacc caggncccag 60  
 cccgggagca gccttanaga gtcctgttt gactgcccgg ctcagn 107

<210> 428  
 <211> 38  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(38)  
 <223> n = A,T,C or G

<400> 428  
 gaacttcna anaangactt tattcactat ttacatt

38

<210> 429

<211> 544  
 <212> DNA  
 <213> Homo sapiens

<400> 429  
 ctttgctgga cggaataaaa gtggacgcaa gcatgacctc ctgatgaggg cgctgcattt 60  
 attgaagagc ggctgcagcc ctgcggttca gattaaaatc cgagaattgt atagacgccg 120  
 atatccacga actcttgaag gactttctga tttatccaca atcaaatcat cggttttcag 180  
 tttggatggg ggctcatcac ctgtagaacc tgacttggcc gtggctggaa tccactcggt 240  
 gccttccact tcagttacac ctcaactcacc atcctctcct gttgggtctg tgctgcttca 300  
 agatactaag cccacatttg agatgcagca gccatctccc ccaattcctc ctgtccatcc 360  
 tgatgtgcag ttaaaaaaat tgccctttta tgatgtcctt gatgttctca tcaagcccac 420  
 gagtttagtt caaagcagta ttcagcgatt tcaagagaag ttttttattt ttgctttgac 480  
 acctcaacaa gttagagaga tatgcatatc cagggatttt ttgccagggtg gtaggagaga 544  
 ttat

<210> 430  
 <211> 507  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(507)  
 <223> n = A,T,C or G

<400> 430  
 cttatcncaa tggggctccc aaacttggct gtgcagtggg aactccgggg gaattttgaa 60  
 gaacactgac acccatcttc caccgcgaca ctctgattta attgggctgc agtgagaaca 120  
 gagcatcaat ttaaaaagct gcccagaatg tntcctggg cagcgttgtg atctttgccn 180  
 ccttcgtgac tttatgcaat gcatcatgct atttcatacc taatgaggga gttccaggag 240  
 attcaaccag gatgtttcta cncctgtggg ttatgacaaa gacaactgcc aaagaatntt 300  
 caagaaggag gactgcaagt atatcgtggg ggagaagaag gacccaaaaa agacctgttc 360  
 tgtcagttaa tggataatct aatgtgcttc tagtaggcac agggctccca ggccaggcct 420  
 cattctcctc tggcctctaa tagtcaatga ttgtgtagcc atgcctatca gtaaaaaagat 480  
 ttttgagcaa aaaaaaaaaa aaaaaaaa 507

<210> 431  
 <211> 392  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(392)  
 <223> n = A,T,C or G

<400> 431  
 gaaaattcag aatggataaa aacaaatgaa gtacaaaata tttcagattt acatagcgat 60  
 aaacaagaaa gcacttatca ggaggactta caaatggaag tacactctan aaccatcatc 120  
 tatcatggct aaatgtgaga ttagcacagc tgtattattt gtacattgca aacacctaga 180  
 aagagatggg aaacaaaatc ccaggagttt tgtgtgtgga gtcctgggtt ttccaacaga 240  
 catcattcca gcattctgag attaggngga ttggggatca ttctggagtt ggaatgttca 300  
 acaaaaagtg tgttgttagg taaaatgtac aacttctgga tctatgcaga cattgaaggt 360  
 gcaatgagtc tggctttttac tctgctgttt ct. 392

<210> 432  
 <211> 387  
 <212> DNA  
 <213> Homo sapiens

<220>

<221> misc\_feature  
 <222> (1)...(387)  
 <223> n = A,T,C or G

<400> 432  
 ggtatccnta cataatcaaa tatagctgta gtacatgttt tcattggngt agattaccac 60  
 aaatgcaagg caacatgtgt agatctcttg tcttattctt ttgtctataa tactgtattg 120  
 ngtagtccaa gctctcggn a gtcagccac tngaaacat gctcccttta gattaacctc 180  
 gtggacnctn ttgttgnatt gtctgaactg tagngccctg tattttgctt ctgtctgnga 240  
 attctgttgc ttctggggca tttccttgng atgcagagga ccaccacaca gatgacagca 300  
 atctgaattg ntccaatcac agctgcgatt aagacatact gaaatcgtac aggaccggga 360  
 acaacgtata gaacactgga gtccttt 387

<210> 433  
 <211> 281  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(281)  
 <223> n = A,T,C or G

<400> 433  
 ttcaactagc anagaanact gcttcagggn gtgtaaaatg aaaggcttcc acgcagttat 60  
 ctgattaaag aacactaaga gagggacaag gctagaagcc gcaggatgtc tacactatag 120  
 caggcnctat ttgggttggc tggaggagct gtggaaaaca tggagagatt ggcgctggag 180  
 atcgccgtgg ctattcctcn ttgntattac accagnaggg ntctctgtnt gccactgggt 240  
 tnnaaaaccg ntatacaata atgatagaat aggacacaca t 281

<210> 434  
 <211> 484  
 <212> DNA  
 <213> Homo sapiens

<400> 434  
 ttttaaaata agcatttagt gctcagtcct tactgagtag tctttctctc cctcctctctg 60  
 aatttaattc tttcaacttg caatttgcaa ggattacaca tttcactgtg atgtatattg 120  
 tggtgcaaaa aaaaaaagt gtctttgttt aaaattactt ggtttgtgaa tccatcttgc 180  
 tttttcccca ttggaactag tcattaaccc atctctgaac tggtagaaaa acatctgaag 240  
 agctagtcta tcagcatctg acaggtgaat tggatgggtc tcagaacat ttcaccaga 300  
 cagcctgttt ctatcctgtt taataaatta gtttgggttc tctacatgca taacaaaccc 360  
 tgctccaatc tgtcacataa aagtctgtga cttgaagttt agtcagcacc cccaccaaac 420  
 tttatttttc tatgtgtttt ttgcaacata tgagtgtttt gaaaataaag tacccatgtc 480  
 tttta 484

<210> 435  
 <211> 424  
 <212> DNA  
 <213> Homo sapiens

<400> 435  
 ggcgcgctca gagcagggtca ctttctgect tccacgtcct ccttcaagga agccccatgt 60  
 gggtagcttt caatatcgca ggttcttact cctctgcctc tataagctca aaccaccaa 120  
 cgatcgggca agtaaaccct ctcctcgcgc gacttcggaa ctggcgagag ttcagcgag 180  
 atgggcctgt ggggaggggg caagatagat gagggggagc ggcatgggtgc ggggtgacct 240  
 cttggagaga ggaaaaaggc cacaagaggg gctgccaccg ccactaacgg agatggccct 300  
 ggtagagacc tttgggggtc tggaaacctc ggactcccca tgctctaact cccacactct 360  
 gctatcagaa acttaaaactt gaggttttc tctgtttttc actcgcaata aattcagagc 420  
 aaac 424

<210> 436

<211> 667  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(667)  
<223> n = A,T,C or G

<400> 436  
acccttgggaa nactctcaca atataaaaggg tcgtagactt tactccaaat tccaaaaagg 60  
tcctggccat gtaatcctga aagttttccc aaggtagcta taaaatcctt ataagggtgc 120  
agcctcttct ggaattcctc tgatttcaaa gtctcactct caagttcttg aaaacgaggg 180  
cagttcctga aaggcaggta tagcaactga tcttcagaaa gaggaactgt gtgcaccggg 240  
atgggctgcc agagtaggat aggattccag atgctgacac cttctggggg aaacaggggt 300  
gccaggtttg tcatagcact catcaaagtc cggtcacgt ctgtgcttcg aatataaacc 360  
tgttcatgtt tataggactc attcaagaat tttctatata tctttcttat atactctcca 420  
agttcataat gctgctccat gccagctgg gtgagttggc caaatccttg tggccatgag 480  
gattccttta tggggtcagt gggaaagggt tcaatgggac ttcggtctcc atgccgaaac 540  
accaaagtca caaacttcaa ctcttgggt agtacacttc ggtctagcca gaaaaaaagc 600  
agaacaaga agccaaggct aaggcttgct gccctgccag gaggaggggt gcagctctca 660  
tgttgag 667

<210> 437  
<211> 693  
<212> DNA  
<213> Homo sapiens

<400> 437  
ctacgtctca accctcattt ttaggtaagg aatcttaagt ccaaagatat taagtgactc 60  
acacagccag gtaaggaaag ctggattggc acactaggac tctaccatac cgggttttgt 120  
taaagctcag gttaggaggc tgataagctt ggaaggaaact tcagacagct ttttcagatc 180  
ataaaagata attcttagcc catgttcttc tccagagcag acctgaaatg acagcacagc 240  
aggtaactct ctattttcac cctcttgct tctactctct ggcagtcaga cctgtgggag 300  
gccatgggag aaagcagctc tctggatgtt tgtacagatc atggactatt ctctgtggac 360  
catttctcca ggttacccta ggtgtcacta ttggggggac agccagcatc tttagctttc 420  
atttgagttt ctgtctgtct tcagtagagg aaacttttgc tcttcacact tcacatctga 480  
acacctaact gctgttgctc ctgaggtggg gaaagacaga tatagagctt acagtattta 540  
tcctatttct aggcactgag ggctgtgggg taccttgtgg tgccaaaaca gatcctgttt 600  
taaggacatg ttgcttcaga gatgtctgta actatctggg ggctctgttg gctctttacc 660  
ctgcatcatg tgctctcttg gctgaaaatg acc 693

<210> 438  
<211> 360  
<212> DNA  
<213> Homo sapiens

<400> 438  
ctgcttatca caatgaatgt tctcctgggc agcgttggtga tctttgccac cttcgtgact 60  
ttatgcaatg catcatgcta tttcatacct aatgagggag ttccaggaga ttcaaccagg 120  
atgtttctac acctgtgggt tatgacaaaag acaactgccca aagaatcttc aagaaggagg 180  
actgcaagta tatctgggtg agaagaagga cccaaaaaag acctgttctg tcagtgaatg 240  
gataatctaa tgtgcttcta gtaggcacag ggctcccagg ccaggcctca ttctcctctg 300  
gcctctaata gtcaataatt gtgtagccat gcctatcagt aaaaagattt ttgagcaaac 360

<210> 439  
<211> 431  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature

&lt;222&gt; (1)...(431)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 439

```

gttcctnnta actcctgcc a gaaacagctc tctcaacat gagagctgca cccctcctcc 60
tggccagggc agcaagcctt agccttggct tcttgtttct gctttttttc tggctagacc 120
gaagtgtact agccaaggag ttgaagtttg tgacttttgt gtttcggcat ggagaccgaa 180
gtcccattga cacttttccc actgacccca taaaggaatc ctcatggcca caaggatttg 240
gccaactcac ccagctgggc atggagcagc attatgaact tggagagtat ataagaaaga 300
gatatagaaa attccttgaat ggtcctata aacatgaaca ggtttatatt cgaagcacag 360
acgttgaccg gactttgatg agtgctatga caaacctggc agcccgtcga cgcggccgcg 420
aatttagtag t

```

&lt;210&gt; 440

&lt;211&gt; 523

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 440

```

agagataaag cttaggtcaa agttcataga gttcccatga actatatgac tggccacaca 60
ggatcttttg tatttaagga ttctgagatt ttgcttgagc aggattagat aaggctgttc 120
tttaaatgtc tgaaatggaa cagatttcaa aaaaaaaccc cacaatctag ggtgggaaca 180
aggaaggaaa gatgtgaata ggctgatggg caaaaaacca atttaccat cagttccagc 240
cttctctcaa ggagaggcaa agaaaggaga tacagtggag acatctggaa agttttctcc 300
actggaaaac tgctactatc tgtttttata tttctgttaa aatatatgag gctacagaac 360
taaaaattaa aacctctttg tgtcccttgg tcttggaaaca tttatgttcc ttttaaagaa 420
acaaaaatca aactttacag aaagatttga tgtatgtaac acatatagca gctcttgaag 480
tatatatatc atagcaaata agtcacttga tgagaacaag cta

```

&lt;210&gt; 441

&lt;211&gt; 430

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 441

```

gttcctccta actcctgcc a gaaacagctc tctcaacat gagagctgca cccctcctcc 60
tggccagggc agcaagcctt agccttggct tcttgtttct gctttttttc tggctagacc 120
gaagtgtact agccaaggag ttgaagtttg tgacttttgt gtttcggcat ggagaccgaa 180
gtcccattga cacttttccc actgacccca taaaggaatc ctcatggcca caaggatttg 240
gccaactcac ccagctgggc atggagcagc attatgaact tggagagtat ataagaaaga 300
gatatagaaa attccttgaat ggtcctata aacatgaaca ggtttatatt cgaagcacag 360
acgttgaccg gactttgatg agtgctatga caaacctggc agcccgtcga cgcggccgcg 420
aatttagtag

```

&lt;210&gt; 442

&lt;211&gt; 362

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 442

```

ctaaggaatt agtagtggtc ccatcacttg tttggagtgt gctattctaa aagattttga 60
tttcctggaa tgacaattat attttaactt tgggtgggga aagagttata ggaccacagt 120
cttcacttct gatacttgta aattaatctt ttattgcact tgttttgacc attagctat 180
atgttttaga atgggtcattt tacggaaaaa tttagaaaaa tctgataata gtgcagaata 240
aatgaattaa tgttttactt aatttatatt gaactgtcaa tgacaaataa aaattctttt 300
tgattatttt ttgttttcat ttaccagaat aaaaactaag aattaaaagt ttgattacag 360
tc

```

&lt;210&gt; 443

&lt;211&gt; 624

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(624)  
 <223> n = A,T,C or G

<400> 443  
 tttttttttt gcaacacaat atacatcaca gtgaaatgtg taatccttgc aaattgcaag 60  
 ttgaaagaat taaattcaga ggaggggaga gaaagagtac tcagtaggga ctgagcacta 120  
 aatgcttatt ttaaaagaaa tgtaaagagc agaaagcaat tcaggctacc ctgccttttg 180  
 tgctggctag tactccggtc ggtgtcagca gcacgtggca ttgaacattg caatgtggag 240  
 cccaaaccac agaaaatggg gtgaaattgg ccactttct attaaacttg cttcctgttt 300  
 tataaaaatat tgtgaataat atcacctact tcaaagggca gttatgaggc ttaaatgaac 360  
 taacgcctac aaaacactta aacatagata acatagggtgc aagtactatg tatctggtac 420  
 atggtaaaca tccttattat taaagtcaac gctaaaatga atgtgtgtgc atatgctaata 480  
 agtacagaga gagggcactt aaaccaacta agggcctgga gggaagggtt cctggaaaga 540  
 ngatgcttgt gctgggtcca aatcttggtc tactatgacc ttggccaaat tatttaaact 600  
 ttgtccctat ctgctaaaca gatc 624

<210> 444  
 <211> 425  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(425)  
 <223> n = A,T,C or G

<400> 444  
 gcacatcatt nntcttgcatt tctttgagaa taagaagatc agtaaatagt tcagaagtgg 60  
 gaagctttgt ccaggcctgt gtgtgaaccc aatgttttgc ttagaaatag aacaagtaag 120  
 ttcattgcta tagcataaca caaaatttgc ataagtgtg gtcagcaaata ccttgaatgc 180  
 tgcttaatgt gagagggttg taaaatcctt tgtgcaaacac tctaactccc tgaatgtttt 240  
 gctgtgtctg gacctgtgca tgccagacaa ggccaagctg gctgaaagag caaccagcca 300  
 cctctgcaat ctgccacctc ctgctggcag gatttgtttt tgcacacctg gaagagccaa 360  
 ggaggcacca gggcataagt gagtagactt atggtcgacg cggccgcgaa ttagtagta 420  
 gtaga 425

<210> 445  
 <211> 414  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(414)  
 <223> n = A,T,C or G

<400> 445  
 catgtttatg nttttggatt actttgggca cctagtgttt ctaaactcgtc tatcattctt 60  
 ttctgttttt caaaagcaga gatggccaga gtctcaacaa actgtatctt caagtctttg 120  
 tgaattcttt tgcattgtgc agattatttg atgtagtctt cttaactag catataaatc 180  
 tgggtgtgtt cagataaatg aacagcaaaa tgtggtggaa ttaccatttg gaaccatttg 240  
 aatgaaaaat tgtgtctcta gattatgtaa caaataacta tttcctaacc attgatcttt 300  
 ggatttttat aatcctactc acaaatgact aggtctctcc tcttgtattt tgaagcagt 360  
 tgggtgctgg attgataaaa aaaaaaaaaa tgcacgcggc cgcgaattta gtag 414

<210> 446  
 <211> 631  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(631)  
 <223> n = A,T,C or G

<400> 446  
 acaaattaga anaaagtgcc agagaacacc acataccttg tccggaacat tacaatggct 60  
 tctgcatgca tgggaagtgt gagcattcta tcaatatgca ggagccatct tgcaggtgtg 120  
 atgctgggta tactggacaa cactgtgaaa aaaaggacta cagtgttcta tacgttggtc 180  
 ccggtcctgt acgatttcag tatgtcttaa tcgcagctgt gattggaaca attcagattg 240  
 ctgtcatctg tgtgggtggc ctctgcatca caagggccaa actttaggta atagcattgg 300  
 actgagattt gtaaaactttc caaccttcca ggaaatgccc cagaagcaac agaattcaca 360  
 gacagaagca aaatacaggg cactacagtt cagacaatac aacaagagcg tccacgaggt 420  
 taatctaaag ggagcatggt tcacagtggc tggactaccg agagcttggg ctacacaata 480  
 cagtattata gacaaaagaa taagacaaga gatctacaca tgttgccctg catttggtgt 540  
 aatctacacc aatgaaaaca tgtactacag ctatatgtga ttatgtatgg atatatttga 600  
 aatagtatac attgtcttga tgttttttct g 631

<210> 447  
 <211> 585  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(585)  
 <223> n = A,T,C or G

<400> 447  
 ccttgggaaa antntcacaa tataaagggt cgtagacttt actccaaatt ccaaaaaggt 60  
 cctggccatg taatcctgaa agttttccca aggtagctat aaaatcctta taagggtgca 120  
 gcctcttctg gaattcctct gatttcaaag tctcactctc aagttcttga aaacgagggc 180  
 agttcctgaa aggcaggtat agcaactgat cttcagaaaag aggaactgtg tgcaccggga 240  
 tgggctgcca gagtaggata ggattccaga tgctgacacc ttctggggga aacagggctg 300  
 ccaggtttgt catagcactc atcaaagtcc ggtcaacgtc tgtgcttcga atataaacct 360  
 gttcatgttt ataggactca ttcaagaatt ttctatatct ctttcttata tactctccaa 420  
 gttcataatg ctgctccatg cccagctggg tgagttggcc aaatccttgt ggccatgagg 480  
 attcctttat ggggtcagtg ggaaagggtg caatgggact tcgggtctcca tgccgaaaca 540  
 ccaaagtcac aaacttcaac tccttgggta gtacacttcg gtcta 585

<210> 448  
 <211> 93  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(93)  
 <223> n = A,T,C or G

<400> 448  
 tgctcgtggg tcattctgan nnccgaactg acctgcccag ccctgcccgan gggccnccat 60  
 ggctccctag tgccctggag agganggggc tag 93

<210> 449  
 <211> 706  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature



&lt;222&gt; (1)...(706)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 449

```

ccaagttcat gctntgtgct ggacgctgga caggggggcaa aagcnnttgc tcgtgggtca 60
ttctgancac cgaactgacc atgccagccc tgccgatggt cctccatggc tccctagtgc 120
cctggagagg aggtgtctag tcagagagta gtccctggaag gtggcctctg ngaggagcca 180
cgggggacagc atcctgcaga tggtcggggcg cgtcccattc gccattcagg ctgcgcaact 240
gttgggaaagg gcgatcgggtg cgggcctctt cgctattacg ccagctggcg aaagggggat 300
gtgctgcaag gcgattaagt tgggtaacgc caggggttttc ccagtcncga cgttgtaaaa 360
cgacggccag tgaattgaat ttaggtgacn ctatagaaga gctatgacgt cgcattgcacg 420
cgtacgtaag cttggatcct ctagagcggc cgcctactac tactaaattc gcggccgcgt 480
cgactgggga tccnactga gagagtggag agtgacatgt gctggacnct gtccatgaag 540
cactgagcag aagctggagg cacaacgcnc cagacactca cagctactca ggaggctgag 600
aacaggttga acctgggagg tggaggttgc aatgagctga gatcaggccn ctgcncccca 660
gcatggatga cagagtgaaa ctccatctta aaaaaaaaaa aaaaaa 706

```

&lt;210&gt; 450

&lt;211&gt; 493

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 450

```

gagacggagt gtcactctgt tgcccaggct ggagtgcagc aagacactgt ctaagaaaaa 60
acagttttta aaggtaaaac aacataaaaa gaaatatcct atagtggaaa taagagagtc 120
aaatgaggct gagaacttta caaagggatc ttacagacat gtcgccaata tcaactgcacg 180
agcctaagta taagaacaac ctttggggag aaaccatcat ttgacagtga ggtacaattc 240
caagtcagggt agtgaaatgg gtggaattaa actcaaatta atcctgccag ctgaaacgca 300
agagacactg tcagagagtt aaaaagttag ttctatccat gaggtgattc cacagtcttc 360
tcaagtcaac acatctgtga actcacagac caagttctta aaccactgtt caaactctgc 420
tacacatcag aatcacctgg agagctttac aaactcccat tgccgagggg cgacgcgggc 480
gcgaatttag tag 493

```

&lt;210&gt; 451

&lt;211&gt; 501

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(501)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 451

```

gggcgcgtcc cattcgccat tcaggctgcg caactgttgg gaagggcgat cgggtgcgggc 60
ctcttcgcta ttacgccagc tggcgaaagg gggatgtgct gcaaggcgat taagttgggt 120
aacgccaggg ttttcccagt cncgacgttg taaaacgacg gccagtgaat tgaatttagg 180
tgacnctata gaagagctat gacgtcgcat gcacgcgtac gtaagcttgg atcctctaga 240
gcggccgcct actactacta aattcgcggc cgcgtcgacg tgggatccnc actgagagag 300
tggagagtga catgtgctgg acnctgtcca tgaagcactg agcagaagct ggaggcacia 360
cgcncagac actcacagct actcaggagg ctgagaacag gttgaacctg ggaggtggag 420
gttgcaatga gctgagatca ggcnctgcn ccccagcatg gatgacagag tgaactcca 480
tcttaaaaaa aaaaaaaaaa a 501

```

&lt;210&gt; 452

&lt;211&gt; 51

&lt;212&gt; DNA

&lt;213&gt; Homo sapi ns

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(51)

<223> n = A,T,C or G

<400> 452

agacggtttc accnttacaa cnccttttag gatgggnntt ggggagcaag c

51

<210> 453

<211> 317

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)...(317)

<223> n = A,T,C or G

<400> 453

tacatcttgc tttttcccca ttggaactag tcattaaccc atctctgaac tggtagaaaa 60  
 acatctgaag agctagtcta tcagcatctg gcaagtgaat tggatgggtc tcagaaccat 120  
 ttcacccana cagcctgttt ctatcctgtt taataaatta gtttgggttc tctacatgca 180  
 taacaaaccc tgtctcaatc tgtcacataa aagtctgtga cttgaagttt antcagcacc 240  
 cccaccaaac tttatttttc tatgtgtttt ttgcaacata tgagtgtttt gaaaataagg 300  
 taccatgtc tttatta 317

<210> 454

<211> 231

<212> DNA

<213> Homo sapiens

<400> 454

ttcgaggtac aatcaactct cagagtgtag tttccttcta tagatgagtc agcattaata 60  
 taagccacgc cagctcttg aaggagtctt gaattctcct ctgctcactc agtagaacca 120  
 agaagaccaa attcttctgc atcccagctt gcaaacaaaa ttgttcttct aggtctccac 180  
 ccttcctttt tcagtgttcc aaagctcctc acaatttcat gaacaacagc t 231

<210> 455

<211> 231

<212> DNA

<213> Homo sapiens

<400> 455

taccaagag ggcataataa tcagtctcac agtaggggtc accatcctcc aagtgaaaaa 60  
 cattgttccg aatgggcttt ccacaggcta cacacacaaa acaggaaaca tgccaagttt 120  
 gtttcaacgc attgatgact tctccaagga tcttcctttg gcatcgacca cattcagggg 180  
 caaagaattt ctcatagcac agctcacaat acagggtctc tttctcctct a 231

<210> 456

<211> 231

<212> DNA

<213> Homo sapiens

<400> 456

ttggcaggta cccttacaaa gaagacacca taccttatgc gttattaggt ggaataatca 60  
 ttccattcag tattatcggt attattcttg gagaaaccct gtctgtttac tgtaaccttt 120  
 tgcactcaaa ttcctttatc aggaataact acatagccac tatttacaaa gccattggaa 180  
 cctttttatt tgggtgcagct gctagtcagt ccctgactga cattgccaag t 231

<210> 457

<211> 231

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature  
<222> (1)...(231)  
<223> n = A,T,C or G

<400> 457  
cgaggtagccc aggggtctga aaatctctnn ttantagtc gatagcaaaa ttgttcatca 60  
gcattcctta atatgatctt gctataatta gatttttctc cattagagtt catacagttt 120  
tatttgattt tattagcaat ctctttcaga agacccttga gatcattaag ctttgtatcc 180  
agttgtctaa atcgatgcct catttcctct gaggtgtcgc tggcttttgt g 231

<210> 458  
<211> 231  
<212> DNA  
<213> Homo sapiens

<400> 458  
aggtctgggt cccccactt ccactcccct ctactctctc taggactggg ctgggccaaag 60  
agaagagggg tgggttaggga agccgttgag acctgaagcc ccaccctcta ccttccttca 120  
acaccctaac cttgggtaac agcatttgga attatcattt gggatgagta gaatttccaa 180  
ggctctgggt taggcatttt ggggggcccag accccaggag aagaagattc t 231

<210> 459  
<211> 231  
<212> DNA  
<213> Homo sapiens

<400> 459  
ggtaccgagg ctgctgaca cagagaaacc ccaacgcgag gaaaggaatg gccagccaca 60  
ccttcgcgaa acctgtgggt gccaccagt cctaaccgga caggacagag agacagagca 120  
gccctgcaat gttttccctc caccacagcc atcctgtccc tcattggctc tgtgctttcc 180  
actatacaca gtcaccgtcc caatgagaaa caagaaggag caccctccac a 231

<210> 460  
<211> 231  
<212> DNA  
<213> Homo sapiens

<400> 460  
gcaggtataa catgctgcaa caacagatgt gactaggaac ggccggtgac atggggaggg 60  
cctatcaccc tattcttggg ggctgcttct tcacagtgat catgaagcct agcagcaaat 120  
cccacctccc cacacgcaca cggccagcct ggagcccaca gaagggtcct cctgcagcca 180  
gtggagcttg gtccagcctc cagtccaccc ctaccaggct taaggataga a 231

<210> 461  
<211> 231  
<212> DNA  
<213> Homo sapiens

<400> 461  
cgaggtttga gaagctctaa tgtgcagggg agccgagaag caggcggcct agggagggtc 60  
gcgtgtgctc cagaagagtg tgtgcatgcc agaggggaaa caggcgcttg tgtgtcctgg 120  
gtggggttca gtgaggagtg ggaaattggg tcagcagaac caagccgttg ggtgaataag 180  
agggggattc catggcactg atagagccct atagtttcag agctgggaat t 231

<210> 462  
<211> 231  
<212> DNA  
<213> Homo sapiens

<400> 462  
aggtaccctc attgtagcca tgggaaaatt gatgttcagt ggggatcagt gaattaaatg 60  
gggtcatgca agtataaaaa ttaaaaaaaa aagacttcat gcccaatctc atatgatgtg 120

146

gaagaactgt tagagagacc aacagggttag tggggttagag atttccagag tcttacattt 180  
tctagaggag gtattttaatt tcttctcact catccagtgt tgtatttagg a 231

&lt;210&gt; 463

&lt;211&gt; 231

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 463

tactccagcc tggtagacaga gcgagaccct atcaccgccc cccaccccccac caaaaaaaaaa 60  
actgagtaga cagggtgtcct cttggcatgg taagtcttaa gtcccctccc agatctgtga 120  
catttgacag gtgtcttttc ctctggaccc cggtgtcccc atctgagtga gaaaaggcag 180  
tggggagggtg gatcttccag tcgaagcggt atagaagccc gtgtgaaaag c 231

&lt;210&gt; 464

&lt;211&gt; 231

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 464

gtactctaag attttatcta agttgccttt tctgggtggg aaagtttaac cttagtgtact 60  
aaggacatca catatgaaga atgtttaagt tggaggtggc aacgtgaatt gcaaacaggg 120  
cctgttcag tgactgtgtg cctgtagtcg cagctactcg ggagtctgtg tgaggccagg 180  
ggtgccagcg caccagctag atgtctgtga acttctaggc cccattttcc c 231

&lt;210&gt; 465

&lt;211&gt; 231

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 465

catgttggtg tagctgtggt aatgctggct gcatctcaga cagggttaac ttcagctcct 60  
gtggcaaatt agcaacaaat tctgacatca tatttatggt ttctgtatct ttgttgatga 120  
aggatggcac aatttttgc tgtgttcata atatactcag attagttcag ctccatcaga 180  
taaactggag acatgcagga cattagggtg gtgttgtagc tctggtaatg a 231

&lt;210&gt; 466

&lt;211&gt; 231

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 466

caggtagctc tttccattgg atactgtgct agcaagcatg ctctccgggg tttttttaat 60  
ggccttcgaa cagaacttgc cacataccca ggtataatag tttctaact ttgccagga 120  
cctgtgcaat caaatattgt ggagaattcc cttagctggag aagtcacaaa gactataggc 180  
aataatggag accagtccca caagatgaca accagtcggt gtgtgcggct g 231

&lt;210&gt; 467

&lt;211&gt; 311

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 467

gtacaccctg gcacagtcca atctgaactg gttcggcact catctttcat gagatggatg 60  
tgggtggcttt tctccttttt catcaagact cctcagcagg gagcccagac cagcctgcac 120  
tgtgccttaa cagaaggtct tgagattcta agtggaatc atttcagtga ctgtcatgtg 180  
gcatgggtct ctgcccaagc tcgtaatgag actatagcaa ggcggtgtg ggacgtcagt 240  
tgtgacctgc tgggcctccc aatagactaa caggcagtgc cagttggacc caagagaaga 300  
ctgcagcaga c 311

&lt;210&gt; 468

&lt;211&gt; 3112

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 468

```
cattgtgttg ggagaaaaac agaggggaga tttgtgtggc tgcagccgag ggagaccagg 60
aagatctgca tgggtgggaag gacctgatga tacagagttt gataggagac aattaaaggc 120
tggaaggcac tggatgcctg atgatgaagt ggactttcaa actggggcac tactgaaacg 180
atgggatggc cagagacaca ggagatgagt tggagcaagc tcaataacaa agtggttcaa 240
cgaggacttg gaattgcatg gagctggagc tgaagtttag cccaattgtt tactagttga 300
gtgaatgtgg atgattggat gatcatttct catctctgag cctcagggtc cccatccata 360
aaatgggata cacagtatga tctataaagt gggatatagt atgatctact tctactgggtt 420
at ttgaaaggga tgaattgaga taatttattt cagggtgccta gaacaatgcc cagattagta 480
catttggtgg aactgagaaa tggcataaca ccaaatttaa tatatgtcag atgttactat 540
gattatcatt caatctcata gttttgtcat ggcccaattt atcctcactt gtgcctcaac 600
aaattgaact gttaacaaag gaatctctgg tctctgggtaa tggctgagca ccactgagca 660
tttccattcc agttggcttc ttgggtttgc tagctgcac actagtcac ttaaataaat 720
gaagttttaa catttctcca gtgatttttt tatctcacct ttgaagatac tatgttatgt 780
gattaaataa agaacttgag aagaacaggt ttcattaaac ataaaatcaa tgtagacgca 840
aattttctgg atgggcaata cttatgttca caggaaatgc tttaaaatat gcagaagata 900
attaaatggc aatggacaaa gtgaaaaact tagacttttt tttttttttt ggaagtatct 960
ggatgttcct tagtcaacta aaggagaact gaaaaatagc agtgagttcc acataatcca 1020
acctgtgaga ttaaggctct ttgtggggaa ggacaaagat ctgtaaattt acagtttcct 1080
tccaaagcca acgtcgaatt ttgaaacata tcaaagctct tcttcaagac aaataatcta 1140
tagtacatct ttcttatggg atgcacttat gaaaaatggt ggctgtcaac atctagtac 1200
tttagctctc aaaatggctc attttaagag aaagtttttag aatctcatat ttattcctgt 1260
ggaaggacag cattgtggct tggactttat aaggtcttta ttcaactaaa taggtgagaa 1320
ataagaaagg ctgctgactt taccatctga ggccacacat ctgctgaaat ggagataatt 1380
aacatcacta gaaacagcaa gatgacaata taatgtctaa gtagtgacat gtttttgac 1440
atttccagcc cctttaaata tccacacaca caggaagcac aaaaggaagc acagagatcc 1500
ctgggagaaa tgcccggccg ccatcttggt tcatcgatga gcctcgccct gtgcctgggtc 1560
ccgcttgatg ggaaggaga ttgaaaaatg aattgatgtg ttctttaaag gatgggcagg 1620
aaaacagatc ctgttggtga tatttatttg gagcggatta cagatttgaa atgaagtac 1680
aaagtgagca ttaccaatga gaggaaaaca gacgagaaaa tcttgatggc ttcacaagac 1740
atgcaacaaa caaatggaa tactgtgatg acatgaggca gccaaagctg ggaggagata 1800
accacggggc agaggggtcag gattctggcc ctgctgccta aactgtgcgt tcataacca 1860
atcatttcat atttctaacc ctcaaaaaca agctgttgta atatctgatc tctacggttc 1920
cttctgggcc caactctct catatatcca gccacactca tttttaatat ttagtccca 1980
gatctgtact gtgacctttc tacactgtag gtttttctta aggagtgttc tggccagg 2100
ttcgtgttgc tgcctaatat gtagctgact gtttttctta aggagtgttc tggccagg 2100
gatctgtgaa caggctggga agcatctcaa gatctttcca gggttatact tactagcaca 2160
cagcatgate attacggagt gaattatcta atcaacatca tctcagtggt ctttgcccat 2220
actgaaattc atttcccact tttgtgcccc ttctcaagac ctcaaaatgt cattccatta 2280
atatcacagg attaaccttt ttttttaacc tggagaatt caatgttaca tgcagctac 2340
ggaatttaaa tacatatatt gttttccagt gcaaagatga ctaagtcctt tatccctccc 2400
ctttgtttga ttttttttcc agtataaagt taaaatgctt agccttgta tggagctgta 2460
tacagccaca gcctctcccc atccctccag ccttatctgt catcaccatc aaccctccc 2520
atgcacctaa acaaaatcta acttgtaatt ccttgaacat gtcaggcata cattattcct 2580
tctgcctgag aagctcttcc ttgtctctta aatctagaat gatgtaaagt tttgaataag 2640
ttgactatct tacttcatgc aaagaaggga cacatatgag attcatcatc acatgagaca 2700
gcaaatacta aaagtgtaat ttgattataa gagtttagat aaatatatga aatgcaagag 2760
ccacagaggg aatgtttatg gggcacgttt gtaagcctgg gatgtgaagc aaaggcagg 2820
aacctcatag tatcttatat aatatacttc atttctctat ctctatcaca atatccaaca 2880
agcttttcac agaattcatg cagtgc aaat ccccaaagg t aacctttatc catttcatgg 2940
tgagtgcgct ttagaatttt ggcaaatcat actggtcact tatctcaact ttgagatgtg 3000
ttgttccttg tagttaattg aaagaaatag ggcactcttg tgagccactt tagggttcac 3060
tcttggaat aaagaattta caaagagcaa aaaaaaaaaa aaaaaaaaaa aa 3112
```

&lt;210&gt; 469

&lt;211&gt; 2229

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 469

```

agctctttgt aaattcttta ttgccaggag tgaaccctaa agtggctcac aagagtgcc 60
tatttctttc aattaactac aaggacaaac acatctcaaa gttgagataa gtgaccagta 120
tgatttgcca aaattctaaa gcgcactcac catgaaatgg ataaagggtta cctttgggga 180
tttgactgc atgaattctg tgaaaagctt gttggatatt gtgatagaga tagagaaatg 240
aagtatatta tataagatac tatgagggtc cctgcctttg cttcacatcc caggcttaca 300
aacgtgcccc ataaacattc cctctgtggc tcttgcatth catatattta tctaaactct 360
tataatcaaa tacactttta gtatttgctg tctcatgtga tgatgaatct catatgtgtc 420
ccttctttgc atgaagtaag atagtcaact tattcaaaac tttacatcat tctagattta 480
agagacaagg aagagcttct caggcagaag gaataatgta tgcctgacat gttcaaggaa 540
ttacaagtta gattttgttt aggtgcatgg gaggggttga tggatgatgac agataaggct 600
ggagggatgg ggagaggctg tggctgtata cagcctcagt acaaggctaa gcattttaac 660
ttataactgg aaaaaaaatc aaacaaaggg gagggataaa ggacttagtc atctttgcac 720
tggaaaacaa aatatgtaat taaattccca tagctgcatg taacattgaa ttcttcagg 780
ttaaaaaaaa agttaatcct gtgatattaa tggatgaca ttttgaggct ttgagaatgg 840
gcacaaaagt gggaaatgaa tttcagtatg ggcaaagaca ctgaggatga tgttgattag 900
ataattcact ccgtaatgat catgctgtgt gctagtaagt ataaccctgg aaagatcttg 960
agatgcttcc cagcctgttc acagatcccc tgggccagaa cactccttag gaaaaacagt 1020
cagctacata ttaggcagca acacgaaggg tctttgaaca aaatgagtaa tgttattcta 1080
cagtgtagaa aggtcacagt acagatctgg gaactaaata ttaaaaatga gtgtggctgg 1140
atataaggag aatgttgggc ccagaaggaa ccgtagagat cagatattac aacagctttg 1200
ttttgagggt tagaaatatg aaatgatttg gttatgaacg cacagttag gcagcagggc 1260
cagaatcctg accctctgcc ccgtggttat ctctcccca gcttggctgc ctcatgtcat 1320
cacagtattc cattttgttt gttgcatgtc ttgtgaagcc atcaagattt tctcgtctgt 1380
tttctctca ttggtaatgc tcactttgtg acttcatttc aaatctgtaa tcccgttcaa 1440
ataaatatcc acaacaggat ctgttttcct gccatcctt taaggaaacac atcaattcat 1500
tttctaattg ccttcctca caagcgggac caggcacagg gcgaggctca tcgatgaccc 1560
aagatggcgg ccgggcattt ctcccaggga tctctgtgct tctttttgtg ctctctgtgt 1620
gtgtggatat ttaaaggggc tggaaatgtg caaaaacatg tcaactacta gacattatat 1680
tgtcatcttg ctgtttctag tgatgttaat tatctccatt tcagcagatg tgtggcctca 1740
gatggtaaag tcagcagcct tcttatttcc tcacctggaa atacatacga ccatttgagg 1800
agacaaatgg caaggtgtca gcataccctg aacttgagtt gagagctaca cacaatatga 1860
ttggtttccg agcatcacia acaccctctc tgtttcttca ctgggcacag aattttaata 1920
cttatttcag tgggctgttg gcaggaacaa atgaagcaat ctacataaag tcaactagtgc 1980
agtgcctgac acacaccatt ctcttgagg cccctctaga gatcccacag gtcatatgac 2040
ttcttgggga gcagtggctc acacctgtaa tcccgcaact ttgggaggct gaggcagggt 2100
ggtcacctga ggtcaggagt tcaagaccag cctggccaat atggtgaaac cccatctcta 2160
ctaaaaatac aaaaattagc tgggcgtgct ggtgcatgcc tgtaatccca gccccaacac 2220
aatggaatt
2229

```

&lt;210&gt; 470

&lt;211&gt; 2426

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 470

```

gtaaattctt tattgccagg agtgaaccct aaagtggctc acaagagtgc cctattttctt 60
tcaattaaact acaaggacaa acacatctca aagttgagat aagtgaccag tatgatttgc 120
caaaattcta aagcgactc accatgaaat ggataaagg tacccttggg gatgtgact 180
gcatgaattc tgtgaaaagc ttgttgata ttgtgataga gatagagaaa tgaagtatat 240
tatataagat actatgaggt tccctgcctt tgcttcacat cccaggctta caaacgtgcc 300
ccataaacat tccctctgtg gctcttgcac ttcatatatt tatctaaact cttataatca 360
aattacactt ttagtatttg ctgtctcatg tgatgatgaa tctcatatgt gtcccttctt 420
tgcatgaagt aagatagtca acttattcaa aactttacat cattctagat ttaagagaca 480
aggaagagct tctcaggcag aaggaataat gtatgcctga catgttcaag gaattacaag 540
ttagattttg tttagggtgca tgggaggggt tgatgggtgat gacagataag gctggaggga 600
tggggagagg ctgtggctgt atacagcctc agtacaaggc taagcatttt aactttatac 660
tggaaaaaaa atcaaacaaa ggggagggat aaaggactta gtcattcttt cactggaaaa 720
caaaatatgt aattaaattc ccatagtgtc atgtaacatt gaattcttcc aggttaaaaa 780
aaaaagttta tcctgtgata ttaatggaat gacattttga ggtcttgaga atgggcacaa 840
aagtgggaaa tgaatttcag tatgggcaaa gacactgagg atgatgttga ttagataatt 900
cactccgtaa tgatcatgct gtgtgctagt aagtataacc ctggaaagat cttgagatgc 960

```

```

ttcccagcct gttcacagat cccctgggcc agaacactcc ttaggaaaaa cagtcagcta 1020
catattaggc agcaacacga aggggtctttg aacaaaaatga gtaatgttat tctacagtgt 1080
agaaagggtca cagtcacagat ctgggaacta aatattaaaa atgagtgtgg ctggatatat 1140
ggagaatgtt gggcccagaa ggaaccgtag agatcagata ttacaacagc tttgttttga 1200
gggttagaaa tatgaaatga tttggttatg aacgcacagt ttaggcagca gggccagaat 1260
cctgaccctc tgccccgtgg ttatctcctc cccagcttgg ctgcctcatg tcatcacagt 1320
attccatttt gtttgttgca tgtcttgtga agccatcaag attttctcgt ctgttttcct 1380
ctcattggta atgctcactt tgtgacttca tttcaaatct gtaatcccg tcaaataaat 1440
atccacaaca ggatctgttt tcctgcccat cctttaagga acacatcaat tcattttcta 1500
atgtccttcc ctcacaagcg ggaccaggca cagggcgagg ctcatcgatg acccaagatg 1560
gcggccgggc atttctccca gggatctctg tgcctccttt tgtgcttctt gtgtgtgtgg 1620
atattttaaag gggctggaaa tgtgcaaaaa catgtcacta cttagacatt atattgtcat 1680
cttgctgttt ctagtgatgt taattatctc catttcagca gatgtgtggc ctcagatggt 1740
aaagtcagca gcctttctta tttctcacct ggaaatacat acgaccattt gaggagacaa 1800
atggcaagggt gtcagcatac cctgaacttg agttgagagc tacacacaat attattggtt 1860
tccgagcatc acaaacaccc tctctgtttc ttactggggc acagaatttt aatacttatt 1920
tcagtgggct gttggcagga acaaatgaag caatctacat aaagtcacta gtgcagtgcc 1980
tgacacacac cattctcttg aggtccctc tagagatccc acaggtcata tgacttcttg 2040
gggagcagtg gctcacacct gtaatcccag cactttggga ggctgaggca ggtgggtcac 2100
ctgagggtcag gagttcaaga ccagcctggc caatatggtg aaaccccatc tctataaaa 2160
atacaaaaat tagctgggag tgctggtgca tgcctgtaat cccagctact tgggaggctg 2220
aggcaggaga attgctggaa catgggaggc ggagggttga gtgagctgta attgtgccat 2280
tgactcga cctgggcgac agagtggaa tctgtttcca aaaaacaaac aaacaaaaaa 2340
ggcatagtca gatacaacgt ggggtgggat tgtaaataga agcaggatat aaagggcagt 2400
gggtgacggt tttgcccac acaatg

```

&lt;210&gt; 471

&lt;211&gt; 812

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 471

```

gaacaaaatg agtaatgtta ttctacagt tagaaaggct acagtacaga tctgggaact 60
aatattaaa aatgagtgtg gctggatata tggagaatgt tgggcccaga aggaaccgta 120
gagatcagat attacaacag ctttgttttg agggtagaa atatgaaatg atttgggtat 180
gaacgcacag tttaggcagc agggccagaa tcctgaccct ctgccccgtg gttatctcct 240
ccccgcttg gctgcctcat gtcacacag tattccattt tgtttgttgc atgtcttgtg 300
aagccatcaa gattttctog tctgttttcc tctcattggt aatgctcact ttgtgacttc 360
atttcaaate tgtaatcccg ttcaaataaa tatccacaac aggatctgtt ttctgccc 420
tcctttaagg aacacatcaa ttcatthtct aatgtccttc cctcacaagc gggaccaggc 480
acaggggcag gctcatcgat gacccaagat ggccggccgg catttctccc agggatctct 540
gtgcttctt ttgtgcttcc tgtgtgtgtg gatattttaa ggggctggaa atgtgcaaaa 600
acatgtcact acttagacat tatattgtca tcttctgtt tctagtgtg ttaattatct 660
ccatttcagc agatgtgtgg cctcagatgg taaagtcagc agcctttctt atttctcacc 720
tctgtatcat caggctcttc ccaccatgca gatcttctg gtctccctcg gctgcagcca 780
cacaatctc ccctctgttt ttctgatgcc ag

```

&lt;210&gt; 472

&lt;211&gt; 515

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(515)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 472

```

acggagactt attttctgat attgtctgca tatgtatgtt ttttaagagtc tggaaatagt 60
cttatcatct tcctatcatg cttattaata aataatacag cccagagaag atgaaaatgg 120
gttccagaat tattgttcct tgcagcccg tgaatctcag caagaggaa caccaactga 180
caatcaggat attgaacctg gacaagagag agaaggaa cctccgatcg aagaacgtaa 240

```

<400> 473

Met Trp Asn Leu Leu His Glu Thr Asp Ser Ala Val Ala Thr Ala Arg  
5 10 15

Arg Pro Arg Trp Leu Cys Ala Gly Ala Leu Val Leu Ala Gly Gly Phe  
20 25 30

Phe Leu Leu Gly Phe Leu Phe Gly Trp Phe Ile Lys Ser Ser Asn Glu  
35 40 45

Ala Thr Asn Ile Thr Pro Lys His Asn Met Lys Ala Phe Leu Asp Glu  
50 55 60

Leu Lys Ala Glu Asn Ile Lys Lys Phe Leu Tyr Asn Phe Thr Gln Ile  
65 70 75 80

Pro His Leu Ala Gly Thr Glu Gln Asn Phe Gln Leu Ala Lys Gln Ile  
85 90 95

Gln Ser Gln Trp Lys Glu Phe Gly Leu Asp Ser Val Glu Leu Ala His  
100 105 110

Tyr Asp Val Leu Leu Ser Tyr Pro Asn Lys Thr His Pro Asn Tyr Ile  
115 120 125

Ser Ile Ile Asn Glu Asp Gly Asn Glu Ile Phe Asn Thr Ser Leu Phe  
130 135 140

Glu Pro Pro Pro Pro Gly Tyr Glu Asn Val Ser Asp Ile Val Pro Pro  
145 150 155 160

Phe Ser Ala Phe Ser Pro Gln Gly Met Pro Glu Gly Asp Leu Val Tyr  
165 170 175

Val Asn Tyr Ala Arg Thr Glu Asp Phe Phe Lys Leu Glu Arg Asp Met  
180 185 190

Lys Ile Asn Cys Ser Gly Lys Ile Val Ile Ala Arg Tyr Gly Lys Val  
195 200 205

Phe Arg Gly Asn Lys Val Lys Asn Ala Gln Leu Ala Gly Ala Lys Gly  
210 215 220

Val Ile Leu Tyr Ser Asp Pro Ala Asp Tyr Phe Ala Pro Gly Val Lys  
225 230 235 240

Ser Tyr Pro Asp Gly Trp Asn Leu Pro Gly Gly Gly Val Gln Arg Gly  
245 250 255

Asn Ile Leu Asn Leu Asn Gly Ala Gly Asp Pro Leu Thr Pro Gly Tyr



260	265	270
Pro Ala Asn Glu Tyr Ala Tyr Arg Arg Gly Ile Ala Glu Ala Val Gly		
275	280	285
Leu Pro Ser Ile Pro Val His Pro Ile Gly Tyr Tyr Asp Ala Gln Lys		
290	295	300
Leu Leu Glu Lys Met Gly Gly Ser Ala Pro Pro Asp Ser Ser Trp Arg		
305	310	315
Gly Ser Leu Lys Val Pro Tyr Asn Val Gly Pro Gly Phe Thr Gly Asn		
325	330	335
Phe Ser Thr Gln Lys Val Lys Met His Ile His Ser Thr Asn Glu Val		
340	345	350
Thr Arg Ile Tyr Asn Val Ile Gly Thr Leu Arg Gly Ala Val Glu Pro		
355	360	365
Asp Arg Tyr Val Ile Leu Gly Gly His Arg Asp Ser Trp Val Phe Gly		
370	375	380
Gly Ile Asp Pro Gln Ser Gly Ala Ala Val Val His Glu Ile Val Arg		
385	390	400
Ser Phe Gly Thr Leu Lys Lys Glu Gly Trp Arg Pro Arg Arg Thr Ile		
405	410	415
Leu Phe Ala Ser Trp Asp Ala Glu Glu Phe Gly Leu Leu Gly Ser Thr		
420	425	430
Glu Trp Ala Glu Glu Asn Ser Arg Leu Leu Gln Glu Arg Gly Val Ala		
435	440	445
Tyr Ile Asn Ala Asp Ser Ser Ile Glu Gly Asn Tyr Thr Leu Arg Val		
450	455	460
Asp Cys Thr Pro Leu Met Tyr Ser Leu Val His Asn Leu Thr Lys Glu		
465	470	475
Leu Lys Ser Pro Asp Glu Gly Phe Glu Gly Lys Ser Leu Tyr Glu Ser		
485	490	495
Trp Thr Lys Lys Ser Pro Ser Pro Glu Phe Ser Gly Met Pro Arg Ile		
500	505	510
Ser Lys Leu Gly Ser Gly Asn Asp Phe Glu Val Phe Phe Gln Arg Leu		
515	520	525
Gly Ile Ala Ser Gly Arg Ala Arg Tyr Thr Lys Asn Trp Glu Thr Asn		
530	535	540
Lys Phe Ser Gly Tyr Pro Leu Tyr His Ser Val Tyr Glu Thr Tyr Glu		
545	550	555
Leu Val Glu Lys Phe Tyr Asp Pro Met Phe Lys Tyr His Leu Thr Val		
565	570	575
Ala Gln Val Arg Gly Gly Met Val Phe Glu Leu Ala Asn Ser Ile Val		
580	585	590

Leu Pro Phe Asp Cys Arg Asp Tyr Ala Val Val Leu Arg Lys Tyr Ala  
 595 600 605  
 Asp Lys Ile Tyr Ser Ile Ser Met Lys His Pro Gln Glu Met Lys Thr  
 610 615 620  
 Tyr Ser Val Ser Phe Asp Ser Leu Phe Ser Ala Val Lys Asn Phe Thr  
 625 630 635 640  
 Glu Ile Ala Ser Lys Phe Ser Glu Arg Leu Gln Asp Phe Asp Lys Ser  
 645 650 655  
 Asn Pro Ile Val Leu Arg Met Met Asn Asp Gln Leu Met Phe Leu Glu  
 660 665 670  
 Arg Ala Phe Ile Asp Pro Leu Gly Leu Pro Asp Arg Pro Phe Tyr Arg  
 675 680 685  
 His Val Ile Tyr Ala Pro Ser Ser His Asn Lys Tyr Ala Gly Glu Ser  
 690 695 700  
 Phe Pro Gly Ile Tyr Asp Ala Leu Phe Asp Ile Glu Ser Lys Val Asp  
 705 710 715 720  
 Pro Ser Lys Ala Trp Gly Glu Val Lys Arg Gln Ile Tyr Val Ala Ala  
 725 730 735  
 Phe Thr Val Gln Ala Ala Ala Glu Thr Leu Ser Glu Val Ala  
 740 745 750

&lt;210&gt; 474

&lt;211&gt; 386

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 474

Met Arg Ala Ala Pro Leu Leu Leu Ala Arg Ala Ala Ser Leu Ser Leu  
 5 10 15  
 Gly Phe Leu Phe Leu Leu Phe Phe Trp Leu Asp Arg Ser Val Leu Ala  
 20 25 30  
 Lys Glu Leu Lys Phe Val Thr Leu Val Phe Arg His Gly Asp Arg Ser  
 35 40 45  
 Pro Ile Asp Thr Phe Pro Thr Asp Pro Ile Lys Glu Ser Ser Trp Pro  
 50 55 60  
 Gln Gly Phe Gly Gln Leu Thr Gln Leu Gly Met Glu Gln His Tyr Glu  
 65 70 75 80  
 Leu Gly Glu Tyr Ile Arg Lys Arg Tyr Arg Lys Phe Leu Asn Glu Ser  
 85 90 95  
 Tyr Lys His Glu Gln Val Tyr Ile Arg Ser Thr Asp Val Asp Arg Thr  
 100 105 110  
 Leu Met Ser Ala Met Thr Asn Leu Ala Ala Leu Phe Pro Pro Glu Gly  
 115 120 125  
 Val Ser Ile Trp Asn Pro Ile Leu Leu Trp Gln Pro Ile Pro Val His

153

130                      135                      140  
 Thr Val Pro Leu Ser Glu Asp Gln Leu Leu Tyr Leu Pro Phe Arg Asn  
 145                      150                      155                      160  
 Cys Pro Arg Phe Gln Glu Leu Glu Ser Glu Thr Leu Lys Ser Glu Glu  
                     165                      170                      175  
 Phe Gln Lys Arg Leu His Pro Tyr Lys Asp Phe Ile Ala Thr Leu Gly  
                     180                      185                      190  
 Lys Leu Ser Gly Leu His Gly Gln Asp Leu Phe Gly Ile Trp Ser Lys  
                     195                      200                      205  
 Val Tyr Asp Pro Leu Tyr Cys Glu Ser Val His Asn Phe Thr Leu Pro  
                     210                      215                      220  
 Ser Trp Ala Thr Glu Asp Thr Met Thr Lys Leu Arg Glu Leu Ser Glu  
 225                      230                      235                      240  
 Leu Ser Leu Leu Ser Leu Tyr Gly Ile His Lys Gln Lys Glu Lys Ser  
                     245                      250                      255  
 Arg Leu Gln Gly Gly Val Leu Val Asn Glu Ile Leu Asn His Met Lys  
                     260                      265                      270  
 Arg Ala Thr Gln Ile Pro Ser Tyr Lys Lys Leu Ile Met Tyr Ser Ala  
                     275                      280                      285  
 His Asp Thr Thr Val Ser Gly Leu Gln Met Ala Leu Asp Val Tyr Asn  
                     290                      295                      300  
 Gly Leu Leu Pro Pro Tyr Ala Ser Cys His Leu Thr Glu Leu Tyr Phe  
 305                      310                      315                      320  
 Glu Lys Gly Glu Tyr Phe Val Glu Met Tyr Tyr Arg Asn Glu Thr Gln  
                     325                      330                      335  
 His Glu Pro Tyr Pro Leu Met Leu Pro Gly Cys Ser Pro Ser Cys Pro  
                     340                      345                      350  
 Leu Glu Arg Phe Ala Glu Leu Val Gly Pro Val Ile Pro Gln Asp Trp  
                     355                      360                      365  
 Ser Thr Glu Cys Met Thr Thr Asn Ser His Gln Gly Thr Glu Asp Ser  
                     370                      375                      380  
 Thr Asp  
 385  
  
 <210> 475  
 <211> 261  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 475  
 Met Trp Val Pro Val Val Phe Leu Thr Leu Ser Val Thr Trp Ile Gly  
                     5                      10                      15  
 Ala Ala Pro Leu Ile Leu Ser Arg Ile Val Gly Gly Trp Glu Cys Glu  
                     20                      25                      30

[illegible]

```
<210> 476
<211> 1079
<212> PRT
<213> Homo sapiens
```

```

<400> 476
Met His His His His His His Met Trp Val Pro Val Val Phe Leu Thr
          5                      10                      15
Leu Ser Val Thr Trp Ile Gly Ala Ala Pro Leu Ile Leu Ser Arg Ile
          20                      25                      30
Val Gly Gly Trp Glu Cys Glu Lys His Ser Gln Pro Trp Gln Val Leu
          35                      40                      45

```

155

Val Ala Ser Arg Gly Arg Ala Val Cys Gly Gly Val Leu Val His Pro  
 50 55 60  
 Gln Trp Val Leu Thr Ala Ala His Cys Ile Arg Asn Lys Ser Val Ile  
 65 70 75 80  
 Leu Leu Gly Arg His Ser Leu Phe His Pro Glu Asp Thr Gly Gln Val  
 85 90 95  
 Phe Gln Val Ser His Ser Phe Pro His Pro Leu Tyr Asp Met Ser Leu  
 100 105 110  
 Leu Lys Asn Arg Phe Leu Arg Pro Gly Asp Asp Ser Ser His Asp Leu  
 115 120 125  
 Met Leu Leu Arg Leu Ser Glu Pro Ala Glu Leu Thr Asp Ala Val Lys  
 130 135 140  
 Val Met Asp Leu Pro Thr Gln Glu Pro Ala Leu Gly Thr Thr Cys Tyr  
 145 150 155 160  
 Ala Ser Gly Trp Gly Ser Ile Glu Pro Glu Glu Phe Leu Thr Pro Lys  
 165 170 175  
 Lys Leu Gln Cys Val Asp Leu His Val Ile Ser Asn Asp Val Cys Ala  
 180 185 190  
 Gln Val His Pro Gln Lys Val Thr Lys Phe Met Leu Cys Ala Gly Arg  
 195 200 205  
 Trp Thr Gly Gly Lys Ser Thr Cys Ser Gly Asp Ser Gly Gly Pro Leu  
 210 215 220  
 Val Cys Asn Gly Val Leu Gln Gly Ile Thr Ser Trp Gly Ser Glu Pro  
 225 230 235 240  
 Cys Ala Leu Pro Glu Arg Pro Ser Leu Tyr Thr Lys Val Val His Tyr  
 245 250 255  
 Arg Lys Trp Ile Lys Asp Thr Ile Val Ala Asn Pro Gly Ser Met Ala  
 260 265 270  
 Thr Ala Gly Asn Pro Trp Gly Trp Phe Leu Gly Tyr Leu Ile Leu Gly  
 275 280 285  
 Val Ala Gly Ser Leu Val Ser Gly Ser Cys Ser Gln Ile Ile Asn Gly  
 290 295 300  
 Glu Asp Cys Ser Pro His Ser Gln Pro Trp Gln Ala Ala Leu Val Met  
 305 310 315 320  
 Glu Asn Glu Leu Phe Cys Ser Gly Val Leu Val His Pro Gln Trp Val  
 325 330 335  
 Leu Ser Ala Ala His Cys Phe Gln Asn Ser Tyr Thr Ile Gly Leu Gly  
 340 345 350  
 Leu His Ser Leu Glu Ala Asp Gln Glu Pro Gly Ser Gln Met Val Glu  
 355 360 365  
 Ala Ser Leu Ser Val Arg His Pro Glu Tyr Asn Arg Pro Leu Leu Ala  
 370 375 380

Asn Asp Leu Met Leu Ile Lys Leu Asp Glu Ser Val Ser Glu Ser Asp  
385 390 395 400  
Thr Ile Arg Ser Ile Ser Ile Ala Ser Gln Cys Pro Thr Ala Gly Asn  
405 410 415  
Ser Cys Leu Val Ser Gly Trp Gly Leu Leu Ala Asn Gly Arg Met Pro  
420 425 430  
Thr Val Leu Gln Cys Val Asn Val Ser Val Val Ser Glu Glu Val Cys  
435 440 445  
Ser Lys Leu Tyr Asp Pro Leu Tyr His Pro Ser Met Phe Cys Ala Gly  
450 455 460  
Gly Gly Gln Asp Gln Lys Asp Ser Cys Asn Gly Asp Ser Gly Gly Pro  
465 470 475 480  
Leu Ile Cys Asn Gly Tyr Leu Gln Gly Leu Val Ser Phe Gly Lys Ala  
485 490 495  
Pro Cys Gly Gln Val Gly Val Pro Gly Val Tyr Thr Asn Leu Cys Lys  
500 505 510  
Phe Thr Glu Trp Ile Glu Lys Thr Val Gln Ala Ser Glu Phe Met Val  
515 520 525  
Gln Arg Leu Trp Val Ser Arg Leu Leu Arg His Arg Lys Ala Gln Leu  
530 535 540  
Leu Leu Val Asn Leu Leu Thr Phe Gly Leu Glu Val Cys Leu Ala Ala  
545 550 555 560  
Gly Ile Thr Tyr Val Pro Pro Leu Leu Leu Glu Val Gly Val Glu Glu  
565 570 575  
Lys Phe Met Thr Met Val Leu Gly Ile Gly Pro Val Leu Gly Leu Val  
580 585 590  
Cys Val Pro Leu Leu Gly Ser Ala Ser Asp His Trp Arg Gly Arg Tyr  
595 600 605  
Gly Arg Arg Arg Pro Phe Ile Trp Ala Leu Ser Leu Gly Ile Leu Leu  
610 615 620  
Ser Leu Phe Leu Ile Pro Arg Ala Gly Trp Leu Ala Gly Leu Leu Cys  
625 630 635 640  
Pro Asp Pro Arg Pro Leu Glu Leu Ala Leu Leu Ile Leu Gly Val Gly  
645 650 655  
Leu Leu Asp Phe Cys Gly Gln Val Cys Phe Thr Pro Leu Glu Ala Leu  
660 665 670  
Leu Ser Asp Leu Phe Arg Asp Pro Asp His Cys Arg Gln Ala Tyr Ser  
675 680 685  
Val Tyr Ala Phe Met Ile Ser Leu Gly Gly Cys Leu Gly Tyr Leu Leu  
690 695 700  
Pro Ala Ile Asp Trp Asp Thr Ser Ala Leu Ala Pro Tyr Leu Gly Thr

705		710		715		720
Gln Glu Glu Cys	Leu Phe Gly Leu Leu	Thr Leu Ile Phe Leu	Thr Cys			
	725		730			735
Val Ala Ala Thr	Leu Leu Val Ala Glu	Glu Ala Ala Leu Gly	Pro Thr			
	740		745			750
Glu Pro Ala Glu	Gly Leu Ser Ala Pro	Ser Leu Ser Pro His	Cys Cys			
	755		760			765
Pro Cys Arg Ala	Arg Leu Ala Phe Arg	Asn Leu Gly Ala Leu	Leu Pro			
	770		775			780
Arg Leu His Gln	Leu Cys Cys Arg Met	Pro Arg Thr Leu Arg	Arg Leu			
	785		790			800
Phe Val Ala Glu	Leu Cys Ser Trp Met	Ala Leu Met Thr Phe	Thr Leu			
	805		810			815
Phe Tyr Thr Asp	Phe Val Gly Glu Gly	Leu Tyr Gln Gly Val	Pro Arg			
	820		825			830
Ala Glu Pro Gly	Thr Glu Ala Arg Arg	His Tyr Asp Glu Gly	Val Arg			
	835		840			845
Met Gly Ser Leu	Gly Leu Phe Leu Gln	Cys Ala Ile Ser Leu	Val Phe			
	850		855			860
Ser Leu Val Met	Asp Arg Leu Val Gln	Arg Phe Gly Thr Arg	Ala Val			
	865		870			875
Tyr Leu Ala Ser	Val Ala Ala Phe Pro	Val Ala Ala Gly Ala	Thr Cys			
	885		890			895
Leu Ser His Ser	Val Ala Val Val Thr	Ala Ser Ala Ala Leu	Thr Gly			
	900		905			910
Phe Thr Phe Ser	Ala Leu Gln Ile Leu	Pro Tyr Thr Leu Ala	Ser Leu			
	915		920			925
Tyr His Arg Glu	Lys Gln Val Phe Leu	Pro Lys Tyr Arg Gly	Asp Thr			
	930		935			940
Gly Gly Ala Ser	Ser Glu Asp Ser Leu	Met Thr Ser Phe Leu	Pro Gly			
	945		950			955
Pro Lys Pro Gly	Ala Pro Phe Pro Asn	Gly His Val Gly Ala	Gly Gly			
	965		970			975
Ser Gly Leu Leu	Pro Pro Pro Pro Ala	Leu Cys Gly Ala Ser	Ala Cys			
	980		985			990
Asp Val Ser Val	Arg Val Val Val Gly	Glu Pro Thr Glu Ala	Arg Val			
	995		1000			1005
Val Pro Gly Arg	Gly Ile Cys Leu Asp	Leu Ala Ile Leu Asp	Ser Ala			
	1010		1015			1020
Phe Leu Leu Ser	Gln Val Ala Pro Ser	Leu Phe Met Gly Ser	Ile Val			
	1025		1030			1035
						1040

Gln Leu Ser Gln Ser Val Thr Ala Tyr Met Val Ser Ala Ala Gly Leu  
1045 1050 1055

Gly Leu Val Ala Ile Tyr Phe Ala Thr Gln Val Val Phe Asp Lys Ser  
1060 1065 1070

Asp Leu Ala Lys Tyr Ser Ala  
1075



1/6

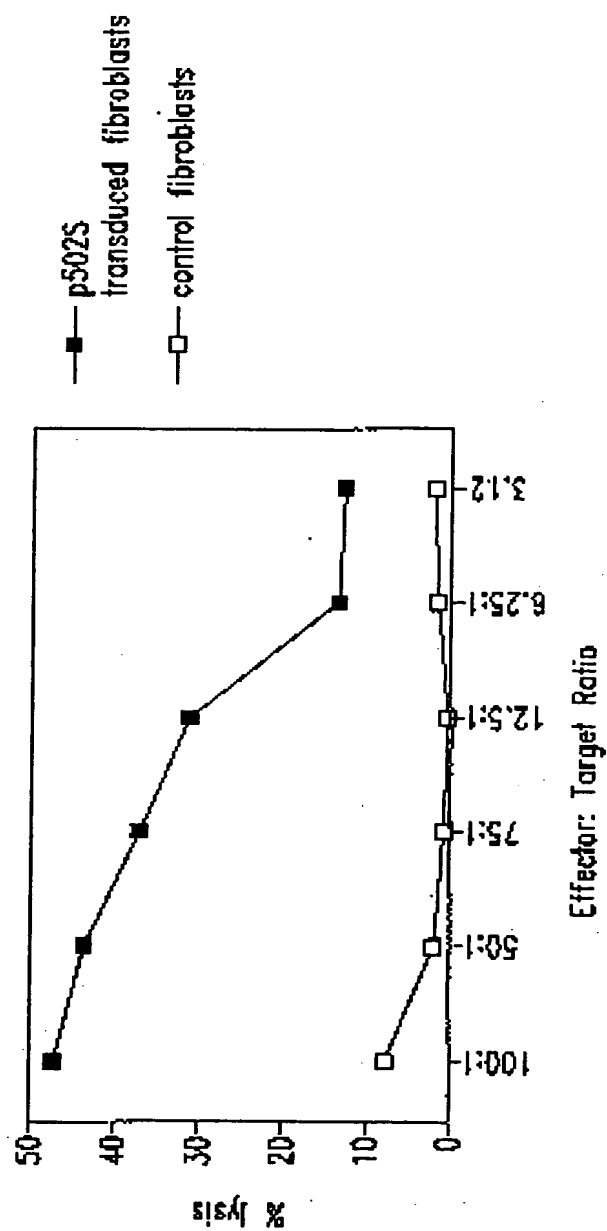
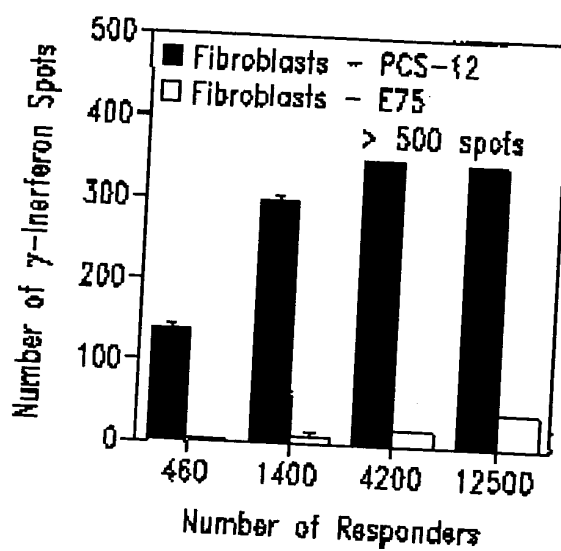
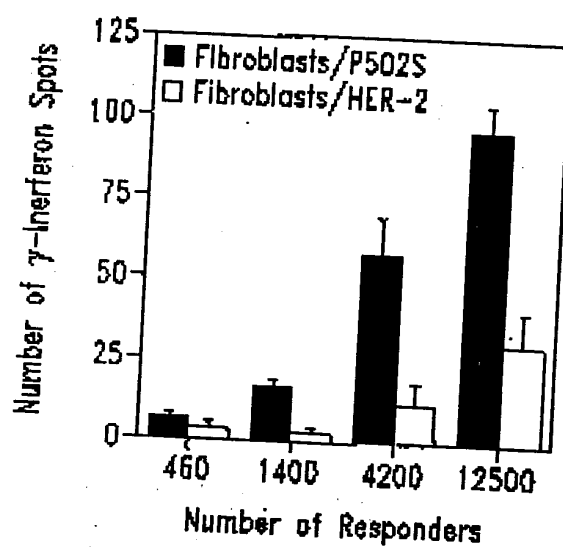


Fig. 1

2/6

*Fig. 2A**Fig. 2B*

3/6

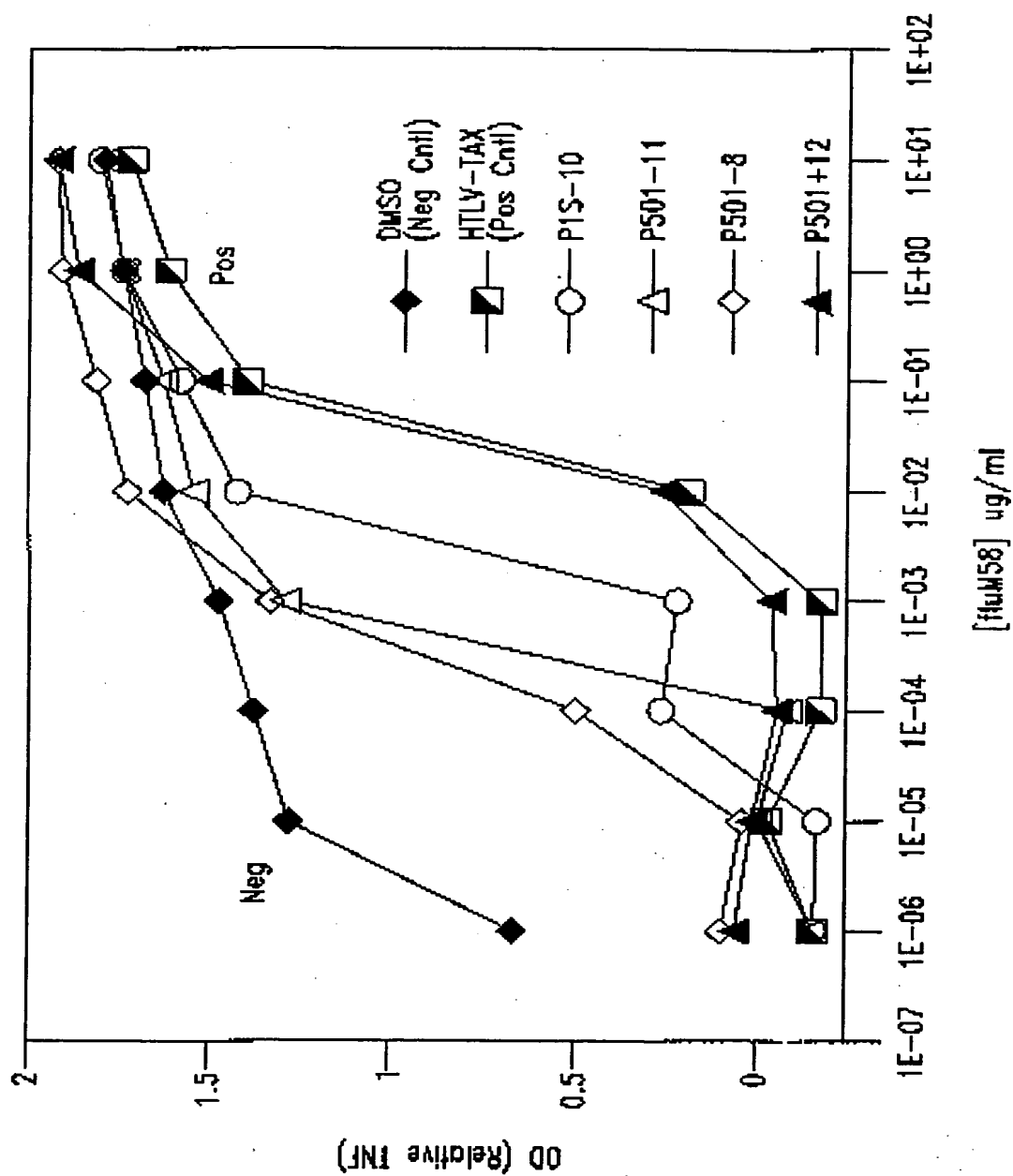


Fig. 3

4/6

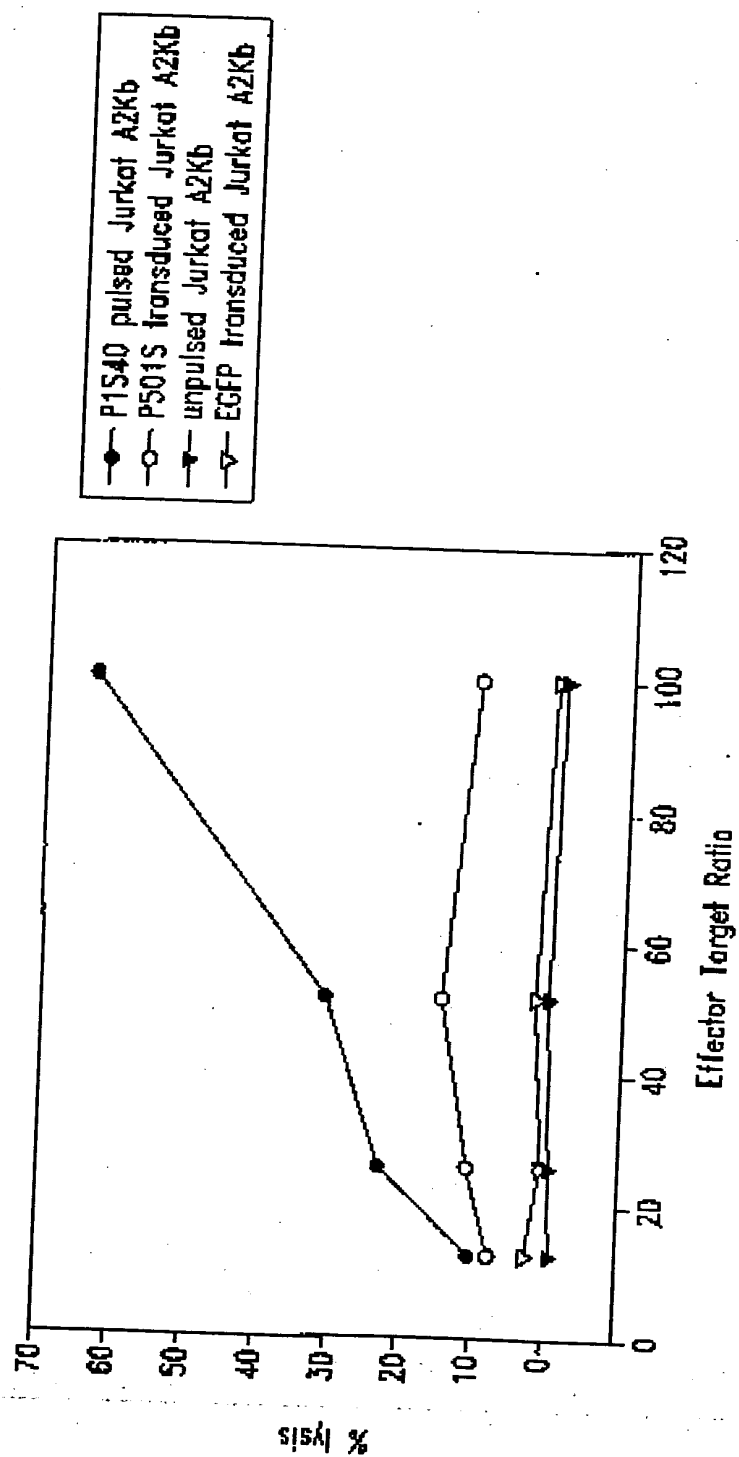


Fig. 4

5/6

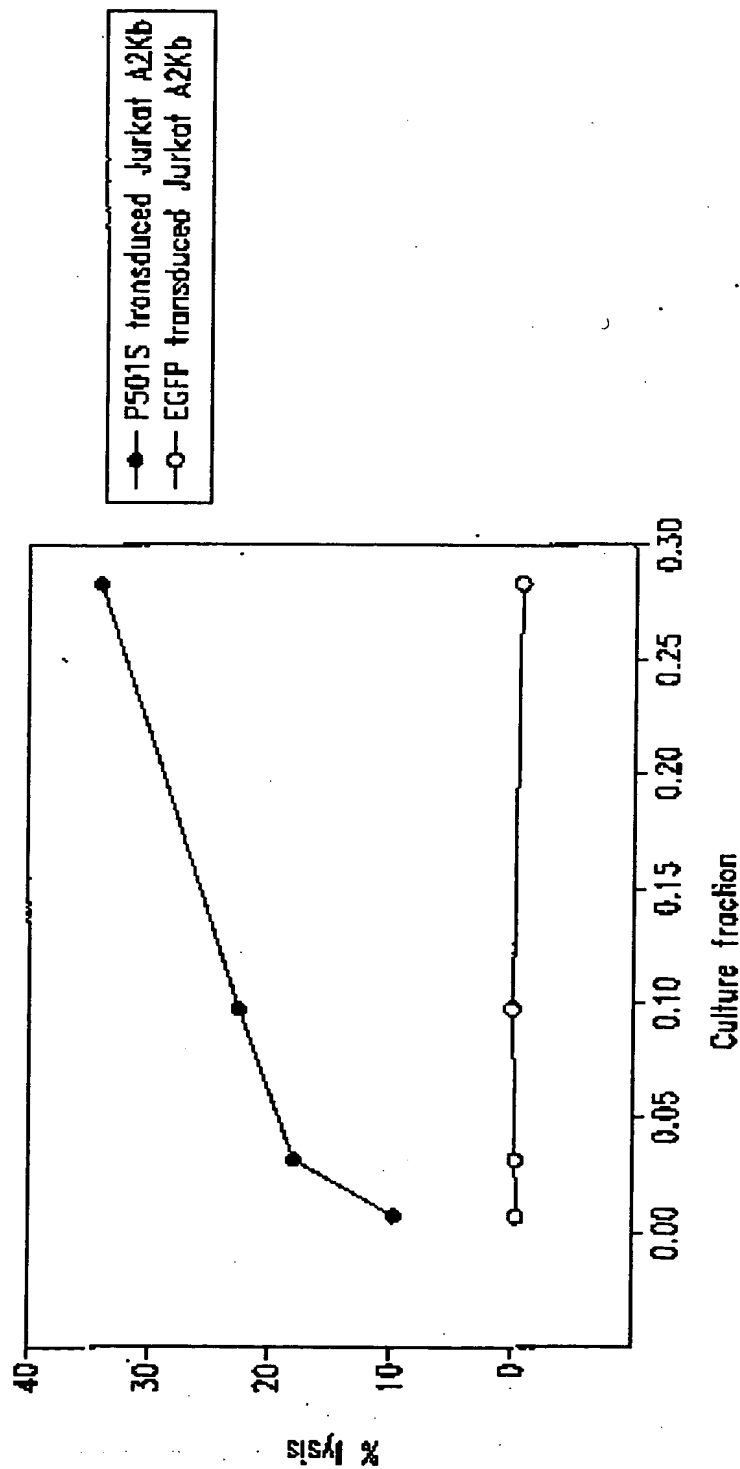
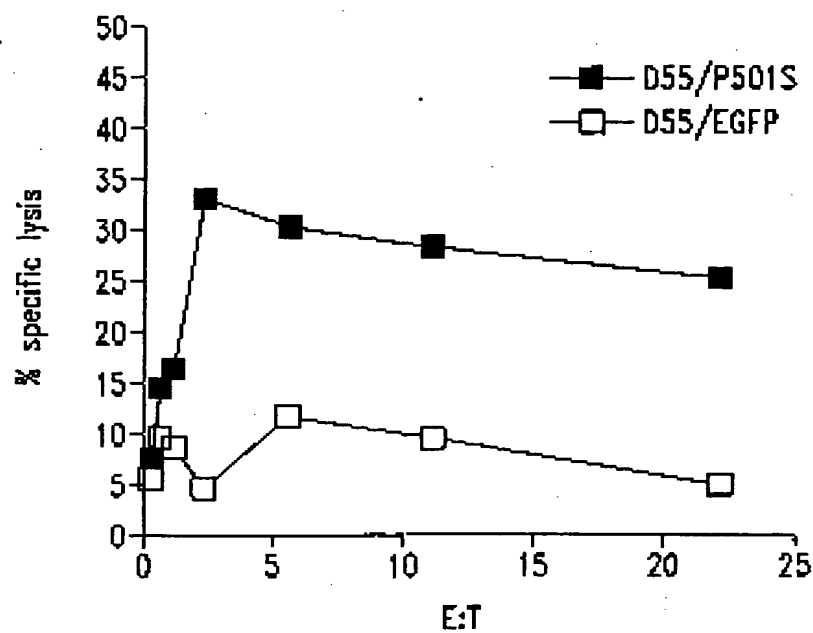
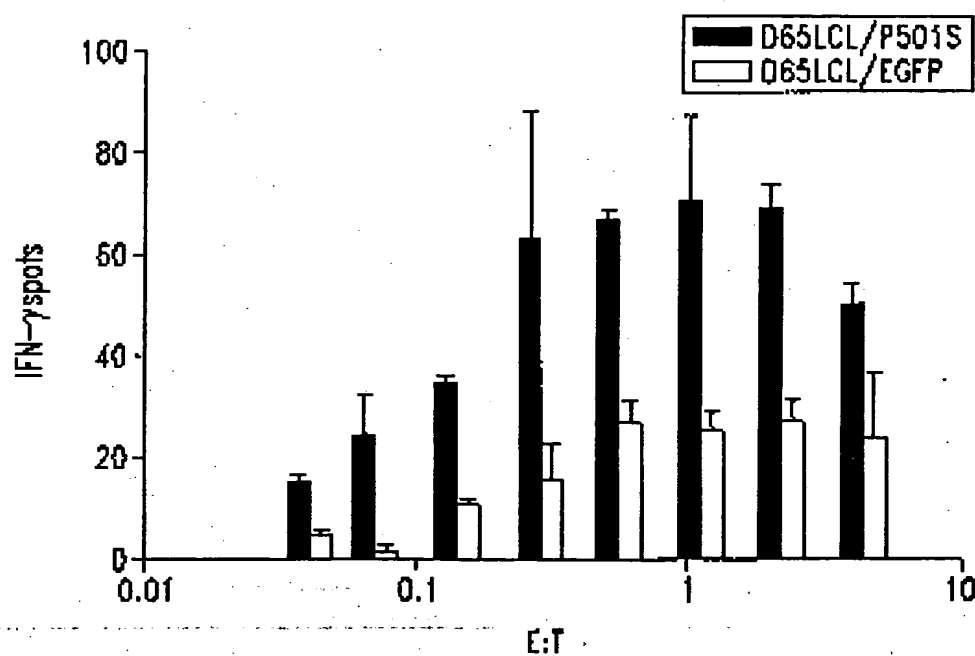


Fig. 5

6/6

*Fig. 6A**Fig. 6B*

## SEQUENCE LISTING

<110> Corixa Corporation et al.

<120> COMPOSITIONS AND METHODS FOR THE THERAPY AND  
DIAGNOSIS OF PROSTATE CANCER

<130> 210121.534PC

<140> PCT

<141> 2000-10-04

<160> 476

<170> FastSEQ for Windows Version 3.0

<210> 1

<211> 814

<212> DNA

<213> Homo sapien

<220>

<221> misc\_feature

<222> (1)...(814)

<223> n = A, T, C or G

<400> 1

tttttttttt	tttttcacag	tataacagct	ctttatttct	gtgagttcta	ctagggaatc	60
atcaaatctg	agggttgtct	ggaggacctc	aatacacctc	cccccatagt	gaalcaagtt	120
ccaggggggc	cagtcctctc	ctttacttca	tccceatccc	atgccaaagg	aagaccctcc	180
ctccttggtc	cacagccttc	tctaggtctc	ccagtgcctc	caggacagag	tgggttatgt	240
tttcagctcc	atccttgcgc	tgagtgtctg	gtgcgttggtg	cctccagott	ctgctcagtg	300
cttcattgac	agtgtccagc	acatgtcact	ctccactctc	tcagtgtgga	tccactagtt	360
ctagagcggc	cggccacggc	gttgagctcc	agcttttgtt	cccttttagtg	agggttaatt	420
gcgcgcttgg	cgtaatcatg	gtcataactg	tttccgtgtg	gaaattgtta	tcgcctcaca	480
attccacaca	acatacagac	cgggaagcata	aagtgtaaaag	cctgggggtgc	ctaattgagt	540
anctaactca	catttaattgc	gttgcgctca	ctgnccgctt	tccagtcngg	aaaactgtcg	600
tgccagctgc	attaatgaat	cggccaacgc	ncggggaaaa	gggttttgcg	ttttgggggc	660
tcttcgcgtt	ctcgctcact	nantcctgcg	ctcggtcatt	cggctgcggg	gaacqctatc	720
actcctcaaa	ggnggtatta	cgtttatccn	naaatcnggg	gatacccnng	aaaaaatntt	780
aacaaagggg	cancuaaggg	cnguaacgta	aaaa			814

<210> 2

<211> 816

<212> DNA

<213> Homo sapien

<220>

<221> misc\_feature

<222> (1)...(816)

<223> n = A, T, C or G

<400> 2

acagaaatgt	tggatgggtg	agcaaccttc	tatacgaactt	acaggacagc	agatggggaa	60
ttcatggctg	ttggagcaat	agaaccccag	ttctaagagc	tgctgatcaa	aggacttggg	120
ctaaagtctg	atgaacttcc	caatcagatg	agcatggatg	attggccaga	aatgaagaag	180
aagtttgcag	atgtatttgc	aaagaagacg	aaggcagagt	ggtgtcaaat	ctttgacggc	240
acagatgcct	gtgtgactcc	ggttctgaat	tttgaggagg	ttgttcatca	tgatcaccac	300
aaggaaacggg	gctcgtttat	caccagtga	gagcaagagc	tgagcccccg	ccctgcacct	360
ctgctgttaa	acaccccagc	catcccttct	ttcaaaaagg	atccactagt	tctaga gcg	420
gccgccaccg	cgggtggagct	ccagcttttg	ttcccttttag	tgaqqqltaa	ttgcgcgctt	480

ggcgtaataca	tggatcatagc	tgttttctgt	gtgaaattgt	tatccgctca	caattccccc	540
aacatacagag	ccggaacata	aagtgttaag	cctgggggtgc	ctaattgamtg	agctaactcn	600
cattaattgc	gttgcgctca	ctgcccgtt	tccagtcggg	aaaactgtcg	tgccactgcn	660
ttantgaato	ngccaccccc	cggaaaaagg	cggttgcntt	ttgggcctct	tccgctttcc	720
togctcattg	atcctngcnc	ccggtcttcg	gctgcggnga	acggttcact	cctcaagggc	780
ggtntnccgg	ttatcccca	acnngggata	ccngga			816

<210> 3  
 <211> 773  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(773)  
 <223> n = A,T,C or G

<400> 3						
cttttgaag	aagggatggc	tggggtgttt	aacagcagag	gtgcagggcg	ggggctcaog	60
tctgtctct	cactggtgat	aaacgggcgc	cgttccttgt	tgtgatcatg	atgaacaacc	120
tctcaaaag	tcagaaacgg	agtcacacag	gcattctgtgc	cgtcaagat	ttgacaccac	180
tctgctctcg	tcttctttgc	aaatacatct	gcacacttct	tcttcatttc	tggccaatca	240
tccatgctca	tctgattggg	aagttcatca	gaatttagtc	canntccttt	gatacagcgc	300
togtagaact	ggggttctat	tgtcccaaca	gcoatgaatt	ccccatctgc	tgtcctgtaa	360
gtogtataga	aaggtgctcc	accatccaac	atgttctgtc	ctcgaggggg	ggccccgtac	420
ccaattcgcc	ctatantgag	tctgattacg	cgcgtcact	ggccgkcggt	ttcaaacgtc	480
gtgactggga	aaaccctggg	cgttaccac	ttaatcgct	tgcagcacat	ccccctttcg	540
ccagctgggc	gtaatanoga	aaaggccccc	accgatcgcc	cttccaacag	ttgcgcacct	600
gaatgggnaa	atgggaaccc	cctgttaccc	cgcattnaac	ccccgcnggg	tttngttgtt	660
acccccacnt	nncccgetta	cactttgcca	gogccttanc	gcccgtctcc	tttmcctttt	720
cttcccttcc	tttccccccc	ctttcccccc	gggtttcccc	cttcaaaccc	cna	773

<210> 4  
 <211> 828  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(828)  
 <223> n = A,T,C or G

<400> 4						
cctcctgagt	cctactgacc	tgtgctttct	ggtgtggagt	ccagggctgc	taggasaagg	60
aatgggcaga	cacaggtgta	tgccaatgtt	tctgaaatgg	gtataatttc	gtcctctcct	120
tcggaacact	ggctgtctct	gaagactctt	cgttcagttt	cagtgaggac	acacacaaag	180
acgtgggtga	ccatgttgtt	tgtgggggtgc	agagatggga	gggggtggggc	ccacccctgga	240
agagtggara	gtgacacaag	gtggacactc	tctacagatc	actgaggata	agctggagcc	300
acaatgcatg	aggcacacac	acagcaagga	tgacnctgta	aacatagccc	acgtgtcct	360
gnnggcactg	ggagccctcn	atnagycctg	gagcanaaag	aaggggagga	tccactagtt	420
ctanagcggc	cgcacccgcg	gtgganctcc	ancttttgtt	cccttttagtg	agggttaatt	480
gcgcgcttgg	cntaactcatg	gtcatanctn	tttctgtgtt	gaatttgtta	tccgtctaca	540
attccacaca	acatacganc	cggaaacata	aanrtgtaaac	ctgggggtgco	taattgantga	600
ctaactcaca	ttaattgcgt	tgcgtcact	gcccgttttc	caatcnggaa	acotgtcttg	660
ccncttgcct	tnatgaactn	gccaaccccc	ggggaaaagc	gtttgcgttt	tgggcgctct	720
tccgttctct	cnetcantta	ntccctnenc	tccgtctatto	cggtgcngc	aaacoggttc	780
accnctcca	aagggggtat	tccggtttcc	ccnactccgg	gganance		828

<210> 5  
 <211> 834  
 <212> DNA  
 <213> Homo sapien



<220>  
 <221> misc\_feature  
 <222> (1)...(834)  
 <223> n = A,T,C or G

<400> 5  
 ttttlltttt tttttactga tagatggaat ttattaaagt tttcacatgt gatagcacat 60  
 agtttttaatt gcatccaaag tectaacasa aactctagca atcaagaatg gcagcatgtt 120  
 attttataac aatcaacacc tgtggctttt aaaatttggg ttccataaga taattttatac 180  
 tgaagtaaat ctagccatgc ttttaaaaaa tgcttttaggt cactccaagc ttggcagtta 240  
 acattttggca taaacaataa taaaacaatc acaatttaant aaataacaaa tacaacattg 300  
 taggccaataa tcatatacag tataaggaaa aggtggtagt gttgagtaag cagttattag 360  
 aatagaatac cttggcctct atgcaaatat gtctagacac ttgattcac tcagccctga 420  
 cattcagttt tcaagtagg agacagggtc tacagtatca ttttacagtt tccaacacat 480  
 tgaaaacaag tagaaaatga tgagttgatt tttattaatg cattacatcc tcaagagtta 540  
 tcaccaacccc ctcagttata aaaaattttc aagttatatt agtcatataa cttgggtgtgc 600  
 ttatttttaa ttagtgetaa atggattang tgaagacaa aatggtcccc taatgtgatt 660  
 gatattggtc atttttaacca gcttctaaat cttaactttc aggccttttg actggaacat 720  
 tgnatnacag tgttccanag ttncacaccta ctggaacatt acagtgtgct tgattcaaaa 780  
 tgttattttt ttaaaaattt aattttaacc tgggtgaaa ataatttgaa atna 834

<210> 6  
 <211> 818  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(818)  
 <223> n = A,T,C or G

<400> 6  
 tttttttttt tttttttttt aagaccctca tcaatagatg gagacatcca gaatatgtca 60  
 aaccacatct acaaaatgoc agtatcaggt ggcggcttcg aagccaaagc qalqillqga 120  
 tgtaaagtga aatattagtt ggcggatgaa ggcgtagtga aggaaggttg agccaataat 180  
 gacgtgaagt ccgtggaagc nlglqgclac aaaaalgl ggcggtaga tccggtcaga 240  
 aatggtgaag ggcgackcga agtaactctga ggcctttagg agggtaaaat agagaccag 300  
 taaaattgla atagcagtg cttgaeltat ttggtttcgg ttgttttcta ttagactatg 360  
 gtgaqlcag gtgattgata ctactgatgc gagtaatacg gatgtgttta ggagtcggac 420  
 ttctggggga tttagcgggg tgatgcctgt tgggggccag tgcctccta gttgggggg 480  
 aggggttagg ctggagtgtt aaaaggctca gaaaaatcct gcgaagaaaa aaacttctga 540  
 ggtaatatct aggtattatcc cgtatcgaag gcctttttgg acaggtgtgt tgtggtggcc 600  
 ttggtatgtg ctttctcgtg ttacatcgcg ccatcattgg tatatggta gtgtgttggg 660  
 ttantanggc ctantatgaa gaacttttgg antggaatta aatcaatngc ttggccggaa 720  
 gtcattanga nggctnaaaa ggcctgttta ngggtctggg ctnggtttta cccnaccat 780  
 ggaatnccc cccgggacna ntgnatccct attcttaa 818

<210> 7  
 <211> 817  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(817)  
 <223> n = A,T,C or G

<400> 7  
 ttttlltttl tttttttttt tggctctaga gggggtagag ggggtgctat agggtaaat 60  
 cgggccctat ttcaagatt tttaggggaa ttaattctag gaccatgggt atgaaactgt 120  
 ggtttgctcc acagatttca ggcattgac cgtagtatac ccccggtcgt gtagcgtga 180

aagtgggttg	gtttagacgt	ccgggaattg	oatctgtttt	taagcctaatt	gtggggacag	240
ctcatgagtg	caagacgtcl	tgtgatgtta	tcattatacn	aattgggggt	tcaatcggga	300
gtactactcg	attgtcaacg	tcsaggagtc	gcaggtegcc	tggttctagg	aataatgggg	360
gaagtatgta	ggaattgaag	attaatccgc	cgtagtccgt	gttctcctag	gttcaatccc	420
attggtggcc	aattgctttg	atggtaaggg	gagggatcgt	tgaactcgtc	tgttatgtta	480
aggatnccct	ngggatggga	aggcnatnae	ggactengga	tnaatggcgg	gcangatttt	540
tcaaaacngtc	tctantctct	gaaacgtctg	saatgttaast	aanaattaan	tttngttatt	600
gaatnttng	gaaaagggct	tacaggacta	gaaaccaaast	angaaaanta	atnnceangg	660
cmttatcntn	aaaggtmata	accnctccta	tnatccccc	caatngnatt	ccccccnenn	720
acnattggat	nccccanttc	canaaanggc	cnccccccgg	tgnannccnc	cttttgttcc	780
cttnantgan	ggttatctnc	cctngcctt	atcancc			817

&lt;210&gt; 8

&lt;211&gt; 799

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc feature

&lt;222&gt; (1) ... (799)

&lt;223&gt; n = A, T, C or G

&lt;400&gt; 8

catttcgggg	tttactttct	saggaaagcc	gagcgggaagc	tqctaacgtg	ggaatcgggtg	60
cataaggaga	actttctgct	ggcacgcgct	agggacaagc	ggggagagcg	ctccgagcgt	120
ctgaagcgca	cgtcccagaa	ggtaggactg	gcactggaac	agctgggaca	catccgagag	180
tacgaacagc	gcctgaaggt	gctggagcgg	gaggtccagc	agtgtagccg	cgtcctgggg	240
tggttgcccg	angcctganc	cgtctgctt	tgttgcctcc	angtgggccc	ccaccccttg	300
acctgcctgg	gtocaaacac	tgagccctgc	tggcggactt	caagganaac	ccccacangg	360
ggattttgct	octanantaa	ggctcatctg	ggcctcggcc	ccccacactg	gttggccttg	420
tctttgangt	gagccccatg	tccatctggg	ccactgtong	gacacacttc	ngggagtgtt	480
ctccttacaa	ccacannatg	cccggtccct	cccggaaccc	antcccancc	tngaaaggtat	540
caagnccctgn	atccactnnt	netanaaccc	gcnccncccg	cngtgggaacc	cnccctntgt	600
tccttttctt	tnaggggtta	tnncccttg	gccttcccan	ngtccctncc	nttttccant	660
gttnaaattg	ttangcnccc	ncnntcccn	cnncnnccan	cccgacccnn	annttannnn	720
ncctgggggt	ncnnnngat	tpacccncc	ncctntant	tgccttnggg	nncnntgccc	780
ctttccctct	aggganncg					799

&lt;210&gt; 9

&lt;211&gt; 801

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc feature

&lt;222&gt; (1) ... (801)

&lt;223&gt; n = A, T, C or G

&lt;400&gt; 9

acgccttgat	cctcccaggg	tgggaactgt	tctggggagga	gcggggcatg	ctgtggtttg	60
taangatgac	actcccaga	gtggtcctga	cagtggtcua	gatggacatg	gggtccacct	120
caaggacaaq	gcccacaggt	gggggggccc	aagcccacat	gatccttact	ctatgagcaa	180
aatcccctgt	gggggcttct	ccttgaagtc	cggccancag	gctcagtctt	tggacccang	240
uaggtcatgg	ggttgtnygc	caactggggg	ccnuaaogca	aaangggcnc	gggcctcngn	300
cacccatccc	angaacgggc	tacaotnetg	gaactccccc	tccacacatt	tcatgogctg	360
ttentaccng	cgnatntgtc	ccanctgttt	cnctgcccac	tccanctctt	nggaagtggg	420
ctacatacgc	cggantcnc	netcccgttt	tgtccctatc	ccgttcccan	caauaaattt	480
cnccntantg	caccnattee	carntttnc	agntttccnc	nncgngcttc	cttnlaaaag	540
ggttganccc	cggaaaatnc	cccaaagggg	gggggcccng	taccccaactn	ccccctnata	600
gctgaantcc	ccatnacenn	gnctcnatgg	ancntccnt	tttaannacn	ttctnaactt	660
gggaananc	ctcgnccntn	ccccnttaa	tccncccttg	cnangnnent	cccccnntcc	720
ncccnntng	gentntnann	cnaaaaaggg	ccnnnancaa	tctcctnnen	cctcantteg	780

ccanccctcg aatcgggcn c

801

<210> 10  
 <211> 789  
 <212> DNA  
 <213> Homo sapien  
  
 <220>  
 <221> misc\_feature  
 <222> (1)...(789)  
 <223> n = A,T,C or G

<400> 10  
 cagtctatnt ggccagtgtg gcagctttcc ctgtggctge cgggtgcaca tgcctgtccc 60  
 acagtgtggc cgtgggtgaca gcttcagccg ccttcacccg gttcaccttc tcagccctgc 120  
 agatccctgc ctacacactg gcctccctct accaccggga gaagcaqntg ttcctgcccc 180  
 aataccggagg ggacactgga ggtgctagca gtgaggacag cctgatgacc agcttccctgc 240  
 caggccctaa gcttggagct ccttccctta atggacacgt gggkqclgga ggcagtggcc 300  
 tgcctccacc tcaccccgca ctctgcgggg cctctgcctg tgatgtctcc gtacgtgtgg 360  
 tgggtgggtg gccacccgan gccaggggtg ttccggggcc gggcatctgc ctggacctgc 420  
 ccctccctga taagtcttcc tgcctgcccc ngkggccccc tccctgttta tgggtctccat 480  
 tgtccagctc agccagctct tccctgcctc tatgggtgtc gccgcaggcc tgggtctggg 540  
 ccatttact ttgctacccc ggtantattt gacaaagacg anttggccaa atactcagcg 600  
 tlaaaaaall ccagcaacct tgggggtgga agccttgcct cactgggtcc aactccccgc 660  
 tectgttaac cccatggggc tgcgggcttg gccgccaatt tctgttgcct ccaaatnat 720  
 gtagctctct gctgccacct gttgctggct gaagtgcata cngcncanct nggggggtng 780  
 gmggttccc 789

<210> 11  
 <211> 772  
 <212> DNA  
 <213> Homo sapien  
  
 <220>  
 <221> misc\_feature  
 <222> (1)...(772)  
 <223> n = A,T,C or G

<400> 11  
 cccaccctac ccaaatatta gacaccaaca cagaaaagct agcaatggat tcccttctac 60  
 ttgtttaa ataatagtta aatatttcaa tgcctgtgtc tctgtgatgg caacagaagg 120  
 accaacaggc acatccctga taaaaggtaa gaggggggtg gatcagcaaa aagacagtgc 180  
 tgtgggctga ggggacctgg ttcttgtgtg ttgcccctca ggactcttcc cctacaaata 240  
 actttcatat gttcaaatcc catggaggag tgtttcatcc tagaaactcc catgcaagg 300  
 ctacattaaa cgaagctgca ggttaagggg cttnagatg ggaaaccagg tgaatgagtt 360  
 tattcagctc ccaaaaaccc ttctctaggt gtgtctcaac taggagqcta gctgttaacc 420  
 ctgagcctgg gtaatccacc tgcagagtc cgcattcca gtgcctgga cccctctggc 480  
 ctccctgtat aagtccagac tgaacccccc ttggaaggnc tccaglcagg cagccrtana 540  
 aactggggaa azaaganaag gacgcccann cccccagctg tgcanctacg cacctcaaca 600  
 gcacagggtg gcagcaaaaa aaccacttta ctttggcaca aacaaaaact ngggggggca 660  
 accccggcac cccnangggg qllaacgga ancggggnea cntgggaacc aatnaggca 720  
 ggcuncuau cucnaatntt gctggggaat ttllcctccc ctaaattntt to 772

<210> 12  
 <211> 751  
 <212> DNA  
 <213> Homo sapien  
  
 <220>  
 <221> misc\_feature  
 <222> (1)...(751)  
 <223> n = A,T,C or G

&lt;400&gt; 12

gccccaatte	cagctgcccac	accaccccacg	gtgactgcat	tagttcggat	gtcatacaaa	60
agctgattga	agcaacccctc	tacttttttg	tctgagacct	tttgcttggt	gcagggtttca	120
ttggtgtgt	tggtgacgtt	gtcattgcaa	cagaatggg	gaaaggcaact	gttctctttg	180
asglongqg	agtcccaaa	atccgtatag	ttggtgaagc	cacagcactt	gagccctttc	240
atggtggtgt	tccacacttg	agtgaagtct	tccgtgggaa	cataatcttt	cttgatggca	300
ggcclacaa	gcaacgtcag	ggaagtgtct	agccattgtg	gtgtacacca	aggcgaccac	360
agcagctgcn	ccctcagcaa	tgaagtatga	gaggungatg	aagaagaacg	tcncgagggc	420
acacttgctc	tcagtcttan	caccatancg	gcccctgaaa	acaaanancg	aagaccacna	480
cncgggtgc	gatgaagana	tnaccccneg	ttgacaaact	tgcattggca	tggganccac	540
agtggccna	saatcttca	aaaaggatgc	cccatenact	gaccccccaa	atgcccactg	600
ccaacagggg	ctgccccacn	cncnnaacga	tgancenact	gnacaagatc	tnclgqict	660
tnatnaact	gaacnctgcn	tngtggctcc	tggtcaggnc	cnnggcclga	cttctnaann	720
aangaactcn	gaagncacca	cngganannc	g			751

&lt;210&gt; 13

&lt;211&gt; 729

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc feature

&lt;222&gt; {1}... (729)

&lt;223&gt; n = A, T, C or G

&lt;400&gt; 13

gagccaggg	tcctctctgc	tgcccactca	gtggcaaac	ccgggagctg	ttttgtcctt	60
tgtgganct	cagcagtncc	ctctttcaga	actcantgce	aganccttg	aacaggagcc	120
accatgcagl	gttccagctt	cattaagacc	atgatgatcc	tnclcaattt	gtcctctttt	180
ctgtgtggtg	cagccctggt	ggcagtgggc	atctgggtgt	caatcgatgg	ggcatccttt	240
ctgaagatct	tggggccact	gtcgtccagt	gccatgcagt	ttgtcaacgt	gggtacttcc	300
ctcctgcag	ccggcggttg	ggtcttagct	ctagggttcc	tgggctgcta	tgggtgctaag	360
actgagagca	agtgtgccc	ogtgacgttc	ttcttcaccc	tcctcctcat	cttcatttgt	420
gaggttgcaa	gctgtggtc	goccttggtg	acaccacaat	ggtgagcac	ttcctgacgt	480
tgtgtgtaat	gctgcccac	aananaagat	tatgggttcc	caggaaact	tcactcaagt	540
gttggaacac	caccatgaaa	gggtcgaagt	gctgtggctt	cnnccaaact	taaggatttt	600
gaagantcac	ctacttcaaa	gaaaanagtg	cctttccccc	atttctgttg	caattgacaa	660
acgtcccca	cacagccaat	tgaaaaactg	cacccaaccc	aaanggggtc	ccaaccanaa	720
allnaaggg						729

&lt;210&gt; 14

&lt;211&gt; 816

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc feature

&lt;222&gt; {1}... (816)

&lt;223&gt; n = A, T, C or G

&lt;400&gt; 14

tgtctctct	caaagttggt	cttgttgcca	taacaaccac	cataggtaaa	gaggggcag	60
tgttcgtga	aggggttgta	gtaccagcgc	gggatgctct	cottgcagag	tcctgtgtct	120
ggcaggtcca	cgcagtgcce	tttgtcactg	gggaatgga	tgcgtggag	ctcgtcaag	180
ccactcgtgt	atttttcaca	ggcagcctcg	tcggacgcgt	cggggcagtt	gggggtgtct	240
tcacactcca	ggaaactgtc	natgcagcag	ccattgctgc	agcggaaactg	ggtgggtga	300
caatgtccag	agcaactgg	atggcgctt	tcocatgnan	gggcccngng	ggaaagtccc	360
tgancoccan	anctgcctct	caaanccccc	acottgcaca	ccccgacagg	ctagaatgga	420
atclctctcc	cgaaaggtag	ttnttcttgt	tgcccaance	ancccnctaz	acaaactctt	480
gcanaletgc	tcgnhgagg	tcntantacc	ancgtgggaa	aaagacccca	agcnycgaa	540
caanccltqll	tggatnccag	gcnaaatct	ncnttctctg	ctgggtggac	gcaccanlna	600

ctgttnanct	ttagncnctg	gtectcntgg	gtcgnncttg	aacctaaten	ccnntcaact	660
gggacaaggt	aantngcent	cctttnaatt	ccnancntn	ccccctggtt	tggggctttt	720
cnctctccta	ccccagaaan	ncogtgttcc	cccccaacta	ggggccnaaa	ccnnttnttc	780
cacaacccctn	ccccaccac	gggttcngnt	ggttng			816

<210> 15  
 <211> 783  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature  
 <222> (1)...(783)  
 <223> n = A,T,C or G

<400> 15						
ccaaggcctg	ggcaggcata	naottgaagg	tacaacccca	ggaacccctg	gtgctgaagg	60
atgtggaaaa	cacagaltgg	cgctactgc	gggtgacac	ggatgtcagg	gtagagagga	120
aagacccaan	ccaggtgqaa	clglggggac	tcaagggaang	caactacctg	ttccagctga	180
cagtqactag	ctcagaccac	ccagaggaca	cgcccaacgt	cacagtcact	gtgctgtcca	240
ccaagcagac	agaagactac	tgcctcgcac	ccaacaangt	gggtcgtgc	cggggtcttt	300
tcccaogctg	gtactatgac	cccccgagac	agatctgcaa	gagtttctgt	tatggaggct	360
gcttgggcaa	caagaacaac	taccttcggg	aagaagagtg	cattctance	tgtcnggggt	420
tgcaagggtg	gcctttgana	ngcanctctg	gggtcango	gactttcccc	caggguccct	480
ccatggaaaag	gcgccatcca	ntgttctctg	gcacctgtca	gcccacccag	lccogclgca	540
ncaatggctg	ctgcactcnac	antttcctng	aattgtgaca	acacccccc	ntgcacccaa	600
ccctcccaac	aaagcttccc	tgttnaaaaa	tacnccantt	ggctttlnac	aaacnccggg	660
cnctccntt	ttcccnntn	aacaaagggc	ncnngcnttt	gactgccc	aaccnnggaa	720
tctnccnngg	aaaaantncc	ccccctggtt	ccnnaaance	cctccncaa	anctncccc	780
ccc						783

<210> 16  
 <211> 801  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature  
 <222> (1)...(801)  
 <223> n = A,T,C or G

<400> 16						
gccccaatc	cagctgccac	accacccacg	gtgactgcat	taqllcggat	gtcatacaaa	60
agctgattga	agcaacccctc	tactttttgg	tcgtgagcct	tttgcttggg	gcaggtttca	120
ttggctgtgt	tggtagcgtt	gtcattgcaa	cagaatgggg	gaaaggcact	gttctctttg	180
aagtaggggtg	agtcctcaaa	atccgtatag	tlgggtgaagc	cacagcactt	gagcccttcc	240
atggtggtgt	tccacactty	aqlgaagctc	tccfgggaac	cataatcttt	cttgatggca	300
ggcactacca	gcaacgtccg	yaaqtgclca	gccattgtgg	tgtacaccaa	ggcgaccaca	360
gcagctgcaa	cctcagcaat	gaagctgagg	aggaggatga	agaagaacgt	cncgagggca	420
cacttgcctc	cvgctcttagc	accctagcag	cccangaac	caagagcaaa	gaccacaacg	480
cengctygga	atgaagaaaa	ntacccacgt	tgacaaactg	catggccact	ggaogacagt	540
tggcccqaan	atcttcaqaa	aagggatgcc	ccatcgattg	aacacccana	tgcccactgc	600
cnacagggt	gcnccnccn	gaaagaatga	gccattgaag	aaggtatcnt	ntggtcttaa	660
tgaactqaaa	centgcctgg	tggccctgt	tcagggtctc	tggcagtgaa	ttctganaaa	720
aaqqaaacnc	ntnagcccc	ccaaangana	aaacaccccc	gggtgttgc	ctgaattggc	780
ggccaaqaan	ccctgcccc	g				801

<210> 17  
 <211> 740  
 <212> DNA  
 <213> Homo sapi n

<220>  
 <221> misc feature  
 <222> (1)... (740)  
 <223> n = A, T, C or G

<400> 17

gtgagagocaa	ggcgtccctc	tgccctgccc	ctcagtgcca	acaccocggga	gctgttttgt	60
ccctttgtga	gcctcagcag	ttccctcttt	cagaactcac	tgccaaagagc	cctgaacagg	120
agccaccatg	cagtgcctca	gcctcattaa	gacctgatg	atccctctca	atttgclcat	180
cttctgtgt	ggtgcagccc	tggtggcagt	ggcctctgg	gtgtcaatcg	atggggcctc	240
ctttctgag	atcttcgggc	cactgtctgc	cagtgcctg	cagtttgtca	acgtgggcta	300
cttctcctc	gcagccggcg	ttgttggtctt	tgctcttgg	ttcttggtct	gctatgggtg	360
tsagacggag	agcaagtgtg	ccctcgtgac	gttctctctc	atccctcctc	tcctcttcat	420
tgctgaagtt	gcagctgctg	tggtgcctt	ggtgtacacc	acaatggctg	aaccttctct	480
gacgttgctg	gtantgctg	ccatcaanaa	agattatggg	ttcccaggaa	aaattcactc	540
aantntggaa	caccnccatg	aaaagggctc	caattttctg	tggttctccc	aactatcccg	600
gaattttgaa	agantcnccc	tacttccaaa	aaaaaanant	tgcttttccc	cccttctgt	660
tgcaatgaaa	acntcccaan	acngccaatn	aaaacctgcc	cnncacaaaa	ggntcncaaa	720
caaaaaaant	nnaagggttn					740

<210> 18  
 <211> 802  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature  
 <222> (1)... (802)  
 <223> n = A, T, C or G

<400> 18

cogctgggtg	cgtggtcca	gngnagccac	gaagcagctc	agcatcacaca	gootcaatca	60
caaggtcttc	cagctgcgc	acattacgca	gggcaagagc	ctccagcaac	actgcataatg	120
ggatacactt	tactttagca	gccagggtga	caactgagag	gtgtcgaagc	ttattctctct	180
gagcctctgt	tagtggagga	agattccggg	cttcagctaa	gtagtcaagc	tatgtcccat	240
aagcaaacac	tgtagcagc	cgggaaggtg	aggcaagtc	actctcagcc	agctctctaa	300
cattgggcat	gtccagcagt	tctccaaaca	cgtagacacc	agngggctcc	agcaccgat	360
ggatggagt	ggccagcgt	gcucccttgg	cgtacttggc	taggagcaga	aattgctct	420
ggtctgccc	tgtaaccttc	acttcgcac	tcactcaetg	actgagtgtg	ggggacttgg	480
gctcaggatg	tccagagag	tggttcgcg	cccttcttta	atgaaacccn	ccanncaacc	540
gtcggcttcc	gcgagntgng	ttcgtcgcnc	ctgggacagg	gtctgtgtgc	cnctacttgc	600
aancctcgtc	nggcccattg	aattcancnc	accggaaactn	gtangatcca	ctnnctctct	660
aaccgncgc	caccgcnnt	ggcaactccac	tcttcttccc	tttacttggg	ggttaaggct	720
acccttancg	ttactcttgg	ccaaaccttn	centgtgtcg	anattnglnaa	tenggnccnc	780
tnccancnc	atangaagcc	ng				802

<210> 19  
 <211> 731  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature  
 <222> (1)... (731)  
 <223> n = A, T, C or G

<400> 19

cnaagcttcc	aggtnacggg	cggcnaanc	tgaccunagg	tancanaang	cagnungcgg	60
gagccacccg	tcacgnggng	gngtctttat	nqgagggggc	ggagccacat	cnctggacnt	120
cntgacccca	actccccc	nncanlga	gtgatggtg	cagaactgaa	ggtnacgtgg	180
caggaaacca	gancnaanc	tgctccnntc	caagtcggcn	nagggggcgg	ggclggccac	240
gencatecnt	cnagtgtgtn	aaagccccc	ctgtctact	tggttggaga	acngcnngga	300

catgccacagn	gttanatsac	nggcngagag	tnantttgcc	tetccottcc	ggctgcgcac	360
cngntntgct	tagnggacat	aacctgacta	cttaactgaa	cccnngaato	tnccnccct	420
ccactaagct	cagaacacaa	aatctcgaca	ccactcantt	gtcaactgnc	tgotcaagta	480
aagtgtaccc	catncccaat	gtntgetnga	ngctctgncc	tgnnttangt	tcggtcctgg	540
gaagacatat	caattnaagc	tatgtttctg	actgcctctt	gotccctgna	acaancnacc	600
cnnctntcca	agggggggnc	ggcccccaat	ccccccaaac	ntnaattinan	tttanccccc	660
ccccmnggcc	cggcctttta	cnancntcnn	nnaacnggna	aaacennngc	tttncccaac	720
nnaatccccc	t					731

<210> 20  
 <211> 754  
 <212> DNA  
 <213> Homo sapien  
  
 <220>  
 <221> misc feature  
 <222> (1)...(754)  
 <223> n = A, T, C or G

<400> 20	
tttttttttt	tttttttttt
taaaaaacccc	ctccattnaa
lqnaaaacttc	cgaaattgtc
60	
caaccccctc	ntccaaatnn
ccntttccgg	gnngggggttc
caaaccccaan	ttanntttgg
120	
ennttaeett	aatnttloot
tggngggnna	snccnaatgt
nangaaagtt	naacccanta
180	
tnancttnaa	tnectggaaa
ccngtngntt	ccaaaaatnt
ttaaccctta	antccctcgg
240	
aatngtttna	nggaaaaccc
aaantctcnt	aaggttggtt
gaaggntnaa	tnaaaanccc
300	
nccccattgt	tttngccac
gcctgaatta	attggnntcc
gntgttttcc	nttaaaanaa
360	
ggnnancccc	ggttantnaa
tccccccnnc	cccaattata
ccganntttt	ttngaattgg
420	
gancccnogg	gaattaaacg
ggnnnnntccc	tnntgggggg
cnggnncccc	ccccntcggg
480	
ggttngggnc	aggnonnaat
tgtttaaggg	tccgaaaaat
ccctccnaga	aaaaaanctc
540	
ccaggtgag	nnfnggggtt
nccccccccc	cangggccct
ctcgnanagt	tgggttttgg
600	
ggggcctggg	attttttttc
ccctntttnc	tccccccccc
ccnqgganaq	aggttngngt
660	
tttgnctenn	gycccccncn
aaganttttn	ccganttnan
ttaaatecnt	gcctnggcga
720	
agtcnllqn	agggntaann
ggccccclnn	cggg
754	

<210> 21  
 <211> 755  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature  
 <222> (1)...(755)  
 <223> n = A, T, C or G

<400> 21	
atcancccat	gaccccnac
nnnggagcnc	tcancgggnc
nnncnacnc	eggcenatac
60	
nngttaggnc	actncnnttn
natcacnccc	cncnactac
gcccncnanc	cnacgcncct
120	
nncaatncc	actqunngcg
cgangtnqan	nqagaaanct
nalacpanag	ncaccanacn
180	
ccagctgtcc	nanaangcct
nnnatacngg	nnnateccat
ntgnanccct	cnasgtattn
240	
nnnnncanct	gattttcccln
anccgcttac	ccntnccccc
lanccctctc	cccccaacna
300	
cgaaggcnct	ggncnnaagg
nngegnencc	ccgctagntc
cccnncasgt	cncnnccta
360	
aactcncnc	nal.lacncc
tlcnl.gagta	tcactccccg
aatctcaccc	tactcaactc
420	
aaacnctcn	gatcccaaat
aatncaagcc	tgnttatnac
actntgactg	ggtctctatt
480	
ttagnggtcc	ntnaancntc
ctaatacttc	cagttctncc
tcnccaattt	ccnaanggot
540	
cttlcngaca	gcantttttg
gtcccnntt	gggttcttan
ngaattgccc	ttcntngaac
600	
gggctentct	tttcccttcg
ttanccctgg	ttcnncgggc
cagttattat	ttcccntttt
660	
aaattentnc	cntttanttt
tggenttcna	aaacccccgc
cttgaaaaag	gccccctggg
720	
aaaaggttgt	tttganaaaa
tttttgcttt	gttcc
755	

<210> 22  
 <211> 849  
 <212> DNA

<213> Homo sapien

<220>

<221> misc\_feature

<222> (1)...(849)

<223> n = A,T,C or G

<400> 22

tttttttttt	tttttangtg	tngtctgtca	ggtagagget	tactacaant	gtgaanaagt	60
aogctnggan	taangeagacc	cgantttctag	ganncnccct	aaaatcanac	tgtgaagatn	120
atcctgnnna	cggaanggtc	accggungat	nntgctaggg	tgnccnctcc	caannenttn	180
cataacteng	nggcccctgcc	caccaccttc	ggcgccccng	ngnccggggcc	egggtcattn	240
gnnttaaccn	cactnngcna	ncggtttccn	ncccnncng	accnngggga	tccgggggtnc	300
tetgtcttcc	cctgnagncn	anaaantggg	ccnccgnccc	ctttacccct	nnacaagcca	360
engccntcta	nccnccggcc	ccctccant	nnnggggact	gccnannget	cogttncnng	420
nnccuccnnn	gggtncctcg	gttgtcgant	cnaccgnang	ccanggatcc	cnaagggaagg	480
tgcgttnttg	gcccttacc	ttcgctnccg	nncccccctc	ccgacnanga	nccgctcccg	540
ccnnnggng	cctcncctcg	caacaacccg	netctctngt	nccgnncccc	ccccccccc	600
nccctcncnc	ngnccgnanc	ctcncncnc	gtctcannca	ccaccccgc	ccgccagggcc	660
ntcancgaen	ggnggaonng	nagcncnttc	gcnccgcgc	ccgnccctcc	cgcncngaa	720
ctncntcngg	ccantnccg	tcaancnna	cnaaaagccg	ctgcgcggcc	cgnagcgncc	780
ncctcncga	gtcctcccg	cttcnanc	angnttccn	cgaggacacn	nncccccgc	840
nnccngcgg						849

<210> 23

<211> 872

<212> DNA

<213> Homo sapien

<220>

<221> misc\_feature

<222> (1)...(872)

<223> n = A,T,C or G

<400> 23

ggcacaacta	tacttegttc	gnactcgtgc	gcctcgetne	tcttttcttc	cgcaaccatg	60
tctgaananc	ccgattnggc	ngatctcna	aagntcgcnc	agtccaaact	gantaacaca	120
cacacnncn	aganaaatcc	ncctgcttcc	anagtanaen	attgaacnng	agaaccangc	180
nggcgaatcg	taatnaggcg	tgcgcgcgcc	atntgtcccc	gtttattntn	ccagctctnc	240
ctnccnacc	taactcttcc	nagetgtcnn	acccctngtn	cgnacccccc	naggtcggga	300
tccgggtttn	nntgaccngg	cncccccctcc	cccccctccat	nacganccnc	ccgcaccacc	360
nanngcncgc	nccccggnct	cttgcgcnc	ctgtcctntn	ccctgtngc	ctggcnngn	420
accgcattga	ccctgcgcnn	ctnennngaaa	ncgnanacgt	cgggttggn	annancgctg	480
tgggnnngcg	tctgcncgc	gttccctccn	ncnccctcca	ccatcttct	tacnggggtct	540
ccnccgcctc	tannncacnc	cctggggagc	tnctctnng	cccccttnac	tccccccctt	600
cgnccgtgnc	cgncccccacc	ntcatttnc	nacgntcttc	acaannncc	ggntnnctcc	660
cnancngncn	gtcancncag	ggaaggngng	ggncnccntg	nttgacgttg	nggnyangtc	720
cgaanantcc	tencntccan	cnctccccc	cggcggnct	ctongttnc	saactlanca	780
ntctccccc	ngngcncntc	tcagoolcnc	cnccccncct	ctctgcantg	tactctgttc	840
tnacennlac	gantttctgn	cncctctttt	cc			872

<210> 24

<211> 815

<212> DNA

<213> Homo sapien

<220>

<221> misc\_f ature

<222> (1)...(815)

<223> n = A,T,C or G

<400> 24



```
<210> 25
<211> 775
<212> DNA
<213> Homo sapien
```

```
<220>
<221> misc feature
<222> {1}...[775]
<223> n = A,T,C or G
```

<400> 25						
ccgagatgtc	tgggtccgtg	gcctttagctg	tgtctggcgt	acletclctt	tctggcctgg	60
aggtatacca	ggctacacca	agagattcagg	tttactcacg	tcatccagca	gagaatggaa	120
agtcaaat	tctgaattgc	tatgtgtctg	ggtttcatcc	atccgacatt	gaanttgact	180
tactgaagaa	ttganagaga	attgaaaagc	tggagcatcc	agacttgtct	ttaagcaagg	240
actggtcttt	ctatctctng	tactacactg	aattcacccc	cactgaaaaa	gatcgagtgtg	300
cctggcgtgt	gaaccatgtg	actttgtcac	agcccaagat	agttaagtgg	gatcgagaca	360
tgtaaagcagn	cnnccatggaa	gtttgaagat	gccgcatttg	gatttggtga	attccaaatt	420
ctgcttggct	gcattttaat	antgatatgc	ntatacacc	taccctttat	gnccccaatt	480
tgtagggggtt	acatnantgt	tcnctntngga	catgatcttc	ctttataant	cncctttctg	540
aattggccgt	cncctngttn	ngaattgttt	cnnaccacag	gtttggctccc	ccaggctccc	600
tcttacggaa	ggcctctggc	cnccttncaa	ggttgggggg	acnnaaaatt	tcccttctgc	660
cncnccncca	cnnctctng	nnccnctttt	ggaacccctt	cnattcccct	tggcctcnna	720
nccttngcta	anaaaacttn	aaanccnggc	naaanntttn	actlcccccc	ttacc	775

```
<210> 26
<211> 820
<212> DNA
<213> Homo sapiens
```

```
<220>
<221> misc feature
<222> {1}...{820}
<223> n - A, T, C or G
```

<400> 26						
anattantac	agtgtaatct	tttcccagag	gtgtgtanag	ggaaacggggc	ctagagggcat	60
cccanagata	ncctatanca	acagtgtctt	gaccaagagc	tgtctgggcac	atttccclqca	120
gaaaagggtg	cgytccocat	cactcctcct	ctcccatagc	catcccagag	gggtgagtac	180
ccatcangcc	ttcgttgagg	gggagtcang	gaaacaacn	accacagagc	anacagaccu	240
ntgatgacca	tgggcgggag	cgaagctctt	ccctgnaccg	gggtggcaga	nganagccta	300
nctgaggggt	cacactataa	acgtlaacga	ccnaga tnan	cacclgcttc	aagtgcacac	360
ttcctacctg	acnauccagc	accnnaaac	gcngcctggg	gacagcncctg	ggencagcta	420
acnnagcaet	cacclgcccc	cccatggcgc	tnegcncerc	tggctcclgnc	aagggaagct	480
cctgtgttga	attncggggc	naccaaaggga	nccccctcct	ccancctgtga	aggaaacaann	540
ctgtggcaatl	ttcccttccg	gccnntcccc	tcttccttta	caagcccccct	ntactccttc	600
lccctctnnt	ntcctgnenc	acttttnacc	ccnnnatttc	ccttnattga	tccgannctn	660

ganattccac tnngeectnc cntenateng naanacnaaa naetntctna ccenggggat 720  
 gggnnecteg nteatcetct ettttteneel acenecnnnt etttgectet cctngatca  
 780tccaaacntc gntggcentn ccccccnnn lcolttnecc  
 820

<210> 27  
 <211> 818  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(818)  
 <223> n = A,T,C or G

<400> 27  
 tctgggtgat ggcctcttcc tcttcagggg cctctgactg ctctggggcca aagaatctct 60  
 tgtttcttct ccgagcccca ggcagcgggtg attcagecct gcccaacotg attctgatga 120  
 ctggggatgc tgtgacggac ccaaggggca aatagggtcc cagggtccag ggaggggcgc 180  
 ctgctgagca ctccggcccc tcacccctgc cagccctgc catgagctct gggctgggtc 240  
 tcggcctcca gggttctgct ctccangca ngccancaa tggcgttgg ccacactggc 300  
 ttcttctgc cccntccctg gctctganc tctgtcttcc tgtctgtgc angenccttg 360  
 gatctcagtt tccctcctc anngaaetct gttctgann tcttcantta actntgantt 420  
 tatnaccnan tggnetgtnc tgtcnnactt taatgggeen gaccggctaa tccctccctc 480  
 notcccttcc anttonnnaa acngccttnc cntctctcc ccntancccg ccngggganc 540  
 utcccttggc ctncaccang gccnnnaccc cccnlnnctn ggggggcnng gtnnctnnc 600  
 ctgntnccc onctcnccnt tccctcgtcc cnnccnccn ngccancttc nengtcccn 660  
 tnnctcttcc ngntctgnaa ngntcncntn tnnnnngncc ngntnntncc tccctctcnc 720  
 cnnlgnang lanttnannc ncngncccc nnnccnnnn nggnantncc tctnccnccg 780  
 cccncccc ngnatteagg cctccnntct ccggcnc 818

<210> 28  
 <211> 731  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(731)  
 <223> n = A,T,C or G

<400> 28  
 aggaagggcg gagggatatt gtangggatt gagggatagg agnetaangg gggaggtgtg 60  
 tcccaacatg anggtgnngt tctcttttga angaggggtg ngtttttann ccnggtgggt 120  
 gattnaacc cattgtatgg agnnaaagg tttnggggat ttttcggctc ttatcagtat 180  
 ntanattect gtnaatcgga aaatnatnt tcnncnggaa aatnttgctc ccatecgnaa 240  
 attnctcccg ggtagtgcac nttngggggc cngccangtt tcccaggctg ctanaatcgt 300  
 actaaagntt naagtggan tncaaatgaa aacctnnac agagnatccn taccogactg 360  
 tnnnttncct tcgcccctng actctgcnng agcccaatac ccnngnognat gtccccngn 420  
 nnnngcgncc tgaannnncc tcgnggctnn gancatcang gggtttcgca tcaaaagcnn 480  
 cgtttncat naaggaactt tngcctcact caaccnctng cctcnncca ttingccctc 540  
 nggttncct acgttntng cncctnnntn ganattttac cggcctnggg naancctcct 600  
 gnaatgggta gggnttntc ttttnaccnn gnggtntact aatcnnctnc accntnctt 660  
 tctnaccccc ccccttttt caateccanc ggcnaatggg gtctcccncc ogangggggg 720  
 nnnccanncc c 731

<210> 29  
 <211> 822  
 <212> DNA  
 <213> Homo sapien

<220>

<221> misc feature  
 <222> (1)...(822)  
 <223> n = A,T,C or G

<400> 29

actagtccag	tgtggtggaa	ttccattgtg	ttgggggncc	ttctatgant	antnttagat	60
cgtccanacc	tcacancctc	ccnaccnangc	ctataangaa	nannaataga	ncgtgnccnt	120
atntntacnc	tcatanncct	cnunaccac	tcctcttaa	ccctactgt	gcctatngcn	180
tnctantct	ntgcgcctn	cnanccacen	gtgggcnac	cnccngnatt	ctcnctctcc	240
tcnccatntn	gcctananta	ngtnccatacc	ctalacctac	nucaatgcta	nnctcaccn	300
tcctnancit	annntaacctc	ccactgacnt	ngactttcnc	atnancctcc	actttagaac	360
tactctgact	ccacngcct	annnattagc	anctcccccc	nacnctntct	ccacccaatc	420
ntcaccacc	ctctcncctg	ctcnccacc	nttncctccg	ctccccnnac	ccccccctc	480
cccaataccc	ncacactgac	ncctaccnccn	ccccatcccg	gcaagccnccn	ggncatttan	540
cccttggaat	cacnctngga	naaaaaaac	ccnaactctc	tanccnccnat	ctccctaana	600
aatnctcctn	naatttactn	ncantnccat	caanccacn	tgaaacnnaa	ccccgtttt	660
tanatccctt	ctttcgaaaa	ccnacccttt	annccccaac	ctttngggcc	cccccnctnc	720
ccnaatgaag	gncncccaat	cnangaaacg	nccttgaaaa	anccaggcna	anannntccg	780
canatccctat	cccttanttn	ggggncctt	ncnngggcc	cc		822

<210> 30  
 <211> 787  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature  
 <222> (1)...(787)  
 <223> n = A,T,C or G

<400> 30

cgccgcctg	ctctggcaca	tgctcctga	atggcatcaa	aagtgatgga	ctgcccattg	60
ctagagaaga	ccttctctcc	tactgtcatt	atggagccct	gcagactgag	ggctccctt	120
gtctgcagga	tttgatgtct	gaagtctgg	agtgtggctt	ggagctcctc	atctacatna	180
gctggaagcc	ctggaggggcc	tctctcgcca	gcctccctcc	tctctccacg	ctctccangg	240
acaccagggg	ctccagggcag	ccattatctc	ccagnangac	atggtgtttc	tccacggcga	300
cccatggggc	ctgnaaggcc	agggtctcct	ttgacacccat	ctctcccgto	ctgcttgga	360
ggcctgggga	tccactantt	ctanaacggg	cgccaccnccg	gtgggagctc	cagcttttgt	420
tccnttaant	gaagggttaat	tgcnccgctt	gggtaatcat	nggtcanaac	tntttcctgt	480
gtgaaattgt	ttntccctcc	ncnattccnc	ncnacatacn	aacccgggan	cataaagtgt	540
taaagccctg	gggtngcctn	nnuatnaac	tnactcaant	taattgcgtt	ggctcatggc	600
ccgcttttcc	ttcnggaaaa	ctgtctntcc	ctgctttntt	gaatcgccca	ccccccnggg	660
aaaagcgall	lgctttttng	qgggtcctt	ccncttcccc	ctcncctaan	ccctnccgct	720
cqgtcgttnc	nggtngcggg	gaanggggat	nnclccncc	naagggggng	agnnngntat	780
ccccaaa						787

<210> 31  
 <211> 799  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature  
 <222> (1)...(799)  
 <223> n = A,T,C or G

<400> 31

tttttttttt	tttttttggc	gatgtactgt	tttaattgca	ggaggtgggg	gtgtgtgtac	60
catgtaccng	ggctattaga	agcaagaaag	aaaggaggag	ggcagagcgc	cctgctgagc	120
aacaaaggac	lccgtcagcc	ttctctgtct	gtctcttggc	gcaggccacat	ggggaggcct	180
ccgcaggggt	gggggacacc	agtccagggg	tgggagcact	acanggggtg	ggagtgggtg	240
gtgctgqgin	cnaatggccc	gncacnatac	cctccgaltc	ttgacacctg	gatttcaucc	300

ggggaccttc	tggttctccc	nggnaacttc	ntnnatcton	aaagaacaca	actgtttctt	360
cngcanttct	ggctgttcat	ggaaagcaca	ggtgtconat	ttinggtggg	acttgggtaca	420
tatggttcog	gcccacctct	cccntonean	aagtaattca	ccccccccc	ccntctnttg	480
cctgggcoct	taantaacca	cacccggaat	canttantta	ttcatcttng	gntgggcttg	540
ntnatcnccn	cctgaangcg	ccaagttgaa	aggccacgoc	gtcccccttc	cccatagnan	600
nttttncnt	cactaatgc	ccccccnggc	aacnatccaa	ccccccccc	tgggggcccc	660
agcccanggc	ccccgnetcg	ggnnncnngn	cncgnantcc	ccaggntctc	ccantcngne	720
ccnnngcncc	cccgcaagca	gaacnaaagg	ntngagccnc	cgcaunnnnn	nggtnnchac	780
ctcgccccc	ccnncgng					799

<210> 32  
 <211> 789  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature  
 <222> (1)... (789)  
 <223> n = A,T,C or G

<400> 32						
tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	60
tttttncnag	ggcagggtta	ttgacaacct	cncgggaacac	aancagggtg	gggacaggac	120
ggcaacaggc	tccggcgcg	gcggcgcgcg	ccctacctgc	ggtaccaaat	ntgcagcctc	180
cgtcccgct	tgatnttct	ctgcagctgc	aggatgcctt	aaaacagggc	ctcgccctn	240
ggtgggcaac	ctgggatttn	aatttccacg	ggcacaatgc	ggtcgcancc	cctcaccacc	300
nattaggaat	agtgtnttta	ccnccncccg	ttggcncaat	ccccntggaa	accacttntc	360
gcggctccgg	catctggtct	taaaccttgc	aaacnctggg	gcctcttttt	tggttantnt	420
ncnngccaca	atcatnactc	agactggcnc	gggttgcccc	caaaaaancc	ccccaaaaac	480
ggncctatgc	ttnnccgggt	tgttgcnatn	tncaicacct	ccccggcnca	ncagggncaac	540
ccaaaagttc	ttgngggccn	caaaaaanct	ccgggggggnc	ccagtttcaa	caaagtcate	600
cccnlLggcc	ccccaaatct	ccccccgntt	nctgggtttg	ggaacccaacg	cctctnnctt	660
tggnnggcaa	gntggntccc	ccttcggggc	cccggtgggc	ccnctctata	ngaaaaancc	720
ntcctnncca	ccatcccccc	nnngnnaacgnc	tancaangna	tccttttttt	tanaaaacggg	780
ccccccnng						789

<210> 33  
 <211> 793  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature  
 <222> (1)... (793)  
 <223> n = A,T,C or G

<400> 33						
gacggaaact	gttgggtggt	ggagcacttt	tctatacgac	ttacaggaca	gcagatgggg	60
aattcalggc	tgttgagaca	atanaacccc	agttctacga	gctgctgato	aaaggacttg	120
gactaaagtc	tgatgaactt	cccaatcaga	tgagcatgga	tgatggccca	gaaatgaana	180
agaagtttgc	agatgtatnt	gcasaagaaga	cgaaggcaga	gtggtgtcaa	atotttgacg	240
gcacagatgc	ctgtgtgact	ccggtttctga	cttttgagga	ggttgttcat	catgatcaac	300
acaangaaacg	gggctcggtt	atcaccantg	aggagcagga	cgtgagcccc	cgccctgcac	360
ctctgctggt	aaacaaccca	gccatccctt	ctttcaaaaag	ggatocacta	cttctagago	420
ggncgcacac	gcgggtggagc	tccagotttt	gttccottta	gtgaggggta	attgocgocet	480
tggegtaatc	atggtcatan	ctgtttcctg	tgtgaaattg	ttatccgctc	acaattccac	540
acaacataacg	anccgggaagc	atnaaatttt	aaagcctggg	ggtngcctaa	tgantgaact	600
nactcacatt	aattggcttt	gcgtctcaatg	cccgotttcc	agtcgggaaa	acctgtccct	660
gccagotgcc	nttaatgaat	cnggccaccc	ccccgggaaa	aggcngtttg	cttnttgggg	720
cgcnctccc	gctttctcgc	ttcctgaant	ccttcccccc	ggtctttcgg	cttgccggna	780
acggtatcna	cct					793

<210> 34  
 <211> 756  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(756)  
 <223> n = A,T,C or G

<400> 34  
 gccgcgaccg gcatgtacga gcaactcaag ggcgagtggg accgtaaaag ccccaatctt 60  
 ancaagtggg gggaanagct gggtcgactc aagctagtto ttctggagct caacttcttg 120  
 ccaaccacag ggaccaagct gaccaaaacag cagctaattc tggcccggtg catactggag 180  
 atcgggggcc aatggagcat cctacgcaan gacatccctt ccttcgagcg ctacatggcc 240  
 cagctcaaat gctactactt tgattacaan gagcagctcc ccgagtcagc ctatatgcac 300  
 cagctcttgg gctcaacctt cctcttcttg ctgtcccaga accgggtggc tgantnccac 360  
 acgganttgg ancggtgccc tgcccanga cacaanacc aatgtctaca tcnaccacca 420  
 gtgtcctgga gcaatactga tgganggcag ctaccncaa gtnttcttgg ccnagggtaa 480  
 cateccucgc cgaagactac accttcttca ttgacatctt gctcgacact atcagggatg 540  
 aaaaatcgng ggttgtctca gaaaggctnc aanaanatcc ttttctctga agggccccgg 600  
 atnctctagt nctagaatcg gcccgccctc ggggtgganc ctccaccctt tegttnccct 660  
 ttactgaggg tlnaktgccc ccttggcgt tatcatggto aenccngttn cctgtgttga 720  
 aaktntlaac ccccccaat tccacgcena cektng 756

<210> 35  
 <211> 834  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(834)  
 <223> n = A,T,C or G

<400> 35  
 ggggatctct anatonacct gnatgcatgg ttgtcgggtgt ggtcgcctgtc gatgaanatg 60  
 accaggctct tgccttqaa gctctcggct gctgtnttta agttgctcag tctgcggtca 120  
 taqtcagaca cnetcttggg caaaaaacan caggatntga gtcttgattt caccctccat 180  
 aatcttcngg gctgtctgct cgggtgaactc gatgaenang qccagctggt tgtgtntgat 240  
 aaanlccanc angttctctt tgggtgacole ccttccasag ttgttcgggc cttcatoaaa 300  
 cttctnnaan angannanc canctttgtc gagctggnc lgganaaca cgtcctgtt 360  
 ggaaactgat ccccaatggt atgtcatcca tgcctctctc tgcctgcaaa aacttgcct 420  
 ggcncaaate cgaactcccn tcttgaaag aagccnatca cccccccctc cctggactcc 480  
 nncaangact ctncgcctnc cccntccnng cagggttggg ggcanccgg gccentgcgc 540  
 ttcttcagcc agttoacnat ntcatcagc cctctgcca gctgtntat tcttggggg 600  
 ggaanccgtc tctcccttcc tgaannaaet ttgacogtng gaatagccgc gcntcncnt 660  
 acntnctggg ccgggttcaa antccctcn ttgnnntcn cctcgggcca ttctggattt 720  
 nccnaacttt tctctccccc cnccccncgg ngtttgntt tttcatnggg ccccaactct 780  
 gctnttggcc antccctgg gggcnntan cnccccctnt ggtcccntng ggcc 834

<210> 36  
 <211> 814  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(814)  
 <223> n = A,T,C or G

<400> 36

cggnccgcttt	cgcgcgcgcgc	cccggtttcca	tgacnaaggc	tcccttcang	tcaaatacnn	60
cctagnaacc	attaatgggt	tgtctacta	atacatcata	cnaacagta	agcctgccc	120
naacgccaac	tcaggccatt	cctaccacag	gaagaaaggc	tggctctctc	ccccccgta	180
ggaaaggcct	gccttgtaag	acaccacaat	ncggctgcat	ctnagctctt	ggttttact	240
aattggaana	aaaaataaac	aanagglttt	gttctcatgg	ctgcccaccg	cagcctggca	300
ctaaaacanc	ccagcgctca	cttctgcttg	ganaaatatt	cttctctctt	tgggacatca	360
ggcttgatgg	talcaactgc	acnttloccc	ccagctgggc	nccttccccc	catntttgtc	420
anlgancctgg	agggcctgaa	nottagtctc	caaaagtctc	ngcccaraag	accggccacc	480
agggggangtc	ntttncagtg	gctctgccc	anantaccn	tctctcnn	gaataaaaag	540
gcccclgaa	ganatgcttc	cancancctt	taagacccat	aatcctngaa	ccatgggtgc	600
cttcgggtct	gatecnaaag	gaatgttcc	gggtcccant	cctctcttg	ttcttaact	660
tgtnttggc	ccttgcctng	atnaccacn	tganatcccc	ngaagcacc	tnccctggc	720
atttganttt	cntaattct	ctgcctacn	notgaaagca	cnattccctn	ggcncnaa	780
ggngaactca	agaaggctctn	ngaaaaacca	cnctn			814

<210> 37  
 <211> 760  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature  
 <222> (1)...(760)  
 <223> n = A, T, C or G

gcattgtgtct	cttctctcaaa	gttcttcttg	tggccataac	aaccaccata	ggtaaaagcg	60
gcgcagtgtt	cgtggaagg	gttctagtac	cagcgcgagg	tgtctctctt	gcagagtcct	120
gtgtctggca	ggctcccgca	algccclttg	tcactgggga	aattggatgc	ctggagctcg	180
tcnaaaccac	tcgtgtattt	ttcacangca	gcctctcccg	aagctcccg	gcagttgggg	240
gtgtcgtcac	actccactaa	actgtcgatn	cancagcccc	ttgtgcagc	ggaactgggt	300
gggctgacag	gtgccagaac	acactggatn	ggcctttcca	tggaaagggc	tgggggaaat	360
cncctnanc	caaaactgct	ctcaaaggcc	accttgacac	cccgacag	ctagaaatgc	420
actcttcttc	ccaaaggtag	ttgttcttgt	tggccaagca	ncctocanca	aacccaaanc	480
ttgcaaaatc	tgtccgtgg	gggtcatnn	taccanggtt	ggggaanaa	accggcngn	540
ganccnccct	gtttgaatgc	naaggnaata	atcctcctgt	cttcttggg	tggaaagca	600
caattgaact	gttaacnttg	ggcggngtgc	cncctnggtg	gtctgaaact	aatcacgcgc	660
actggaaaaa	ggtaggtgc	tctcttgat	tcccaaanft	ccctngntt	tgggtntttt	720
ctctctncc	ctaaaaatcg	tnttcccccc	cctangggc			760

<210> 38  
 <211> 724  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature  
 <222> (1)...(724)  
 <223> n = A, T, C or G

tttttttttt	tttttttttt	tttttttttt	tttttaaaaa	ccccctccat	tgaatgaaa	60
cttcnnaaat	tgtccaaacc	cctcnnccaa	atnncattt	cggggggggg	gttccaaacc	120
caaattaatt	ttgganttta	aattaaatnt	tnattngggg	aaaaanccaa	atgtnaagaa	180
aatttaaccc	attatnaact	taaatnccn	gaaccccttg	gnttccaaaa	atttttaacc	240
cttaaatccc	tcggaaattg	ntaanggaaa	accaaattcn	cctaaggctn	tttgaagggt	300
ngatttaaac	ccccttnant	cttttttacc	cngnctnaa	ntatttngnt	tcgggtgttt	360
tcctnttaan	cntnggtaac	tcccgntaat	gaannccct	aanccaatta	aaccgaattt	420
tttttgaaat	ggaaattccn	nggggaattna	cgggggtttt	tcccnitttg	gggcaalnc	480
ccncttttgc	gggtttgggn	ntaggttgaa	tttttnnang	cccccaaaaa	cccccaaaa	540
aaaaaactcc	caagntttaa	ttingaatnc	cccttccca	ggccttttgg	gaaagnggg	600
ttnttggggg	cengggantt	cnlloccccc	ttncncccc	cccccnnggt	aaanggttat	660

ngnnttttggg ttttggggccc ctttannnggac cttccgggatn gaaattaaat ccccggggnog 720  
gcog 724

<210> 39  
<211> 751  
<212> DNA  
<213> Homo sapien  
  
<220>  
<221> misc feature  
<222> {1}...{751}  
<223> n = A, T, C or G

<400> 39  
ttttttttttt tttttctttg ctcacattta atttlltallt tgattttttt taatgctgca 60  
ccacacacata ttatlllcat ttgtttcttt tatttccattt tatttgtttg ctgctgctgt 120  
tttctttattt ttactgaaa gtgagaggga actttttgtg ctttttttcc tttttctgta 180  
ggcgcclta agctttctaa atttggaca tctagcaag ctgaanggaa aagggggttt 240  
cgcaaatca ctggggggaa nggaaagggtt gttttgttaa tcatgacctt tgggtgggtga 300  
ttaactgctt gtacaattac ntttcacttt taattaattg tgctnaange ttttaattana 360  
cttggggggtt cctcccccac accaaccccn ctgacaaaaa gtgcncngccc tcaaatnatg 420  
tcccgccnnt cnttgaaaca cacngcngaa ngttctcatt ntcccccncnc caggtnaaaa 480  
tgaagggtta ccatntttta cncacacctc acntggcnnn gctgaatcc tcnaaaannc 540  
cctcaannc aatttctnng ccccggtcnc gentnngtcc cncocgggt cggggaantn 600  
caccocnga annccntnnc naacnaaatt ccgaaaatat tcccnntcnc tcaattcccc 660  
cnnagactnt cctcnncnnc cncaattttc ttttnttcae gaacncgnnc cnaaaatgn 720  
nnnnccctc cctngtccn naatnccan c 751

<210> 40  
<211> 753  
<212> DNA  
<213> Homo sapien  
  
<220>  
<221> misc feature  
<222> {1}...{753}  
<223> n = A, T, C or G

<400> 40  
gtggtatttt ctgtaagatc aggtgttctt cctcgttagg ttttagagga acaccctcat 60  
agatgaaaac ccccccga caagcagcaact gcaactgcca agcagccggg ctggaggggg 120  
cgccctatgc acagctgggc ccttgagaca gcaaggcttc gatgtcaggc tcatgtcaa 180  
tggctctgaa ggggggggtg taactgctga ggggacacac gtccaggccc accaggaact 240  
tctcaaatgt ccaggcaacn tggttgcgac acacaggaga ccagggtgatn agcttgggggt 300  
cgttcataac cgggtgggc tgggtgctgg gagctggcag ggctcccc aggaaggcna 360  
ataaaagggt cgcctccgca cgttccnct cgcacttctc naanaccatg angttgggt 420  
cnaaccacac accnnccgg acttccclga nggaattccc aaatctcttc gntcttggg 480  
ttctnctgat ggcctnctg gttgcccngn atgccaancc nccccaancc ccgggggtcct 540  
aaanccccc cctccclntt tcatclgggt tntntcccc ggacnttgtt tctctcaag 600  
ggancccata tctcnaccan tactcaant nccccccnt gnnaccancc cttctanngn 660  
tcccncccg acctclggc cntcaaanan gcttncancc cctgggtctg ccttcccccc 720  
tnccctctct gnaccnccn tttgtctcan tnt 753

<210> 41  
<211> 341  
<212> DNA  
<213> Homo sapien

<400> 41  
actatatcca tcacaacaga catgcttcat cccatagact tcttgacata gcttcaaatg 60  
agtgaaccca tccctgattt atatacatat atgttctcag tattttggga gccttccac 120  
ttctttaaac ctgttctatt atgaaactg aaaaatgga tttgtgagga gttaaaaagt 180

tatagcttgt	ttacgtagta	agtttttgaa	gtctacattc	aatccagaca	cttagttgag	240
tggtaaactg	tgatttttaa	aaaatatcat	ttgagaatat	tctttcagag	gtattttcat	300
ttttactttt	tgattaattg	tgttttatat	attagggtag	t		341

<210> 42  
 <211> 101  
 <212> DNA  
 <213> Homo sapien

aacttactgaa	tttagttctg	tgctotttco	taltttagtg	tgatcctaa	atactttgat	60
gtttcaaaaca	ttctaaataa	ataattttca	gtgggttcac	a		101

<210> 43  
 <211> 305  
 <212> DNA  
 <213> Homo sapien

acatctttgt	tacagtctaa	gatgtgttct	taaatacaca	ttccttctcg	gtcctcaccc	60
tccagggtgg	tctcacactg	taattagagc	tattgaggag	tctttacagc	aaattaagat	120
tcagatgcct	tgctaagtct	agagttctag	agttatgttt	cagaaagtct	aagaaaccca	180
cctcttgaga	ggtcagtaaa	gaggacttaa	tatttcatat	ctacaaaatg	accacaggat	240
tggtatacaga	acgagagtta	tcctggataa	ctcagagctg	agtaacctgc	cgggggcccgc	300
tcgaa						305

<210> 44  
 <211> 852  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature  
 <222> (1)... (852)  
 <223> n = A,T,C or G

acataaatat	cagagaaaag	tagtctttga	aataatttaac	tccaggagtt	ctttgtttct	60
gattattttg	tggtgttttt	ggtttgtgtc	caaagtattg	gcagcttcag	ttttcatttt	120
ctctccatcc	tggggcattc	ttcccaaatt	tatataccag	tottcgtcca	tccacacgct	180
ccagaatttc	tctttttag	taatatctca	tagctcggct	gagcttttca	taggiccatgc	240
tgctgtttgt	ctctctttta	ccccatagct	gagccactgc	ctctgatttc	aaggaaacctga	300
agagcgcctc	agatcgggtc	tcccatttta	ttaatcctgg	gtttctgtct	gggttcaaga	360
ggatgtccgc	gatgaattcc	cataagttag	tccctctcgg	gttqlgcttc	ttgggtgtggc	420
acttggcagg	ggggctctgc	tcccttttca	tatcagggtga	ctctgcaaca	ggaaggtgac	480
tggtggllgt	calggagatc	tgagucgggc	agaaaglttt	gctgtccaac	aaatctactg	540
tgctaccata	gttgggtgla	tataaatagt	tctnqtcttt	ccagggtgtc	atgatggaag	600
gctcagtttg	ttcagtcctg	acaatgacct	tgtgtgtgga	ctggaacagg	tcactactgc	660
actggccgtt	ccacttcaga	tgctgcaagt	tgctgtagag	gagntgcccc	gccgtccctg	720
ccgcccgggt	gaactcctgc	aaactcatgc	tgcaaaaggtg	ctcgcggttg	atgtogaact	780
cntggaaagg	gatacaattg	gcctccagct	ggttgggtgtc	caggaggtga	tggagccact	840
cccacacctg	gt					852

<210> 45  
 <211> 234  
 <212> DNA  
 <213> Homo sapien

acaacagacc	cttgcctcgt	aacgacctca	tgctcatcaa	gttggagcaa	tccqlgtccg	60
agtctgacac	catccggagc	atcagcattg	cttcgcagtg	ccctaaccgc	gggaacctctt	120
gcctcgtttc	tggctggggg	ctgctgguga	acggcagaat	gcctaccctg	ctgcagtgccg	180



tgaacgtgtc ggtggtgtct gaggaggtct gcagtaagct ctatgaccgc ctgt 234

<210> 46  
 <211> 590  
 <212> DNA  
 <213> Homo sapien  
 <220>  
 <221> misc\_feature  
 <222> (1)...(590)  
 <223> n = A,T,C or G

<400> 46  
 acttttttatt taaatgttta taaggcagat ctatgagaat gatagaaaac atggtgtgta 60  
 atttgatagc aatatttttg agattacaga gtttttagta ttaccaatta cacagttaa 120  
 aagaagataa tatattocaa gcanatacaa aatatctaata gaagatcaa ggcaggaaaa 180  
 tgantataac taattgacaa tggaaaatca attttaatgt gaattgcaca ttatccttta 240  
 aaagctttca aaanaanaa ttattgcagt ctanttaatt caaacagtgt taaatggtat 300  
 caggataaan aactgaagg canaaagaat taattttcac ttcatgtaac ncaccanac 360  
 ttacaatggc ttaaatgcan ggaanaagca gtggaagtag ggaagtatc aaggtctttc 420  
 tggctcttaa tctgccttac tctttgggtg tggctttgat cctctggaga cagctgccag 480  
 ggctcctgtt atatccacaa tccagcagc aagatgaagg gatgaaaaag gacacatgct 540  
 gccttccttt gaggagactt catctcactg gccaacactc agtcacatgt 590

<210> 47  
 <211> 774  
 <212> DNA  
 <213> Homo sapien  
 <220>  
 <221> misc\_feature  
 <222> (1)...(774)  
 <223> n = A,T,C or G

<400> 47  
 acaagggggc ataatgaagg agtggggana gatttttaag aaggaaaaaa aacgaggccc 60  
 tgaacagaat ttctcctgnac aacggggcct caaataaatt ttcttgggga ggttcaagac 120  
 gcttccactgc ttgaaactta oatggatgtg ggacanaatt ttctgtaatg accctgaggg 180  
 cattccagcc gggacclclg qaggaaggat aacagaaaag gggacaaaag ctaatcccaa 240  
 aacatcaag aaaggaagggt ggcgtcatc ctcacagcct acacagttct ccagggtct 300  
 cctcaterct ggaggacgac aglqagga caactgaca lqlccccagg ctctgtgtg 360  
 ctggtctctg gtcttcagcc cccagctctg gaagencac ctctgtgat cctggtggc 420  
 ccacactcct tgaacacaca tcccaggtt atattcctgg acctggctga acctcctatt 480  
 cctacttccg agatgccttg ctccctgcag cctgtcaaaa tcccactcgc cctccaaaa 540  
 acggoatggg aagcctttct gacttgcctg attactccag catcllqaa caatccctga 600  
 ttcccactc cttagaggca agatagggtg gttaaagata gggctggacc ccttggagcc 660  
 aggtgtgtg cttcaaattn tggctcatt acgagctatg ggaccttggg caagtnatct 720  
 tcaactctat gggcctcatt ttgtctacc tgcaaaatgg gggataataa tagt 774

<210> 48  
 <211> 124  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(124)  
 <223> n = A,T,C or G

<400> 48  
 canaaattga aattttataa aaaggcattt ttctcttata tccalaaat gatataattt 60  
 ttgcaantat anaastgtgt cataaattat aatgttccct saltacgct caacgcaact 120

tggt

124

<210> 49  
 <211> 147  
 <212> DNA  
 <213> Homo sapien  
  
 <220>  
 <221> misc\_feature  
 <222> {1}...{147}  
 <223> n = A,T,C or G

<400> 49  
 gccgatgcta ctatttttatt gcaggagggtg ggggtgtttt tattattctc tcaaacagctt 60  
 tgttggtaca ggtgggtgtct gactgcattna aawantttt tacgggtgat tgcanaaatt 120  
 ttagggcacc catatcccaa qcantgt 147

<210> 50  
 <211> 107  
 <212> DNA  
 <213> Homo sapien

<400> 50  
 acattaaatt aataaaagga ctgttgggggt tctgctaaaa cacatggctt gatatatgtc 60  
 atggttttgag gttaggagga gttaggcata tgttttggga gaggggt 107

<210> 51  
 <211> 204  
 <212> DNA  
 <213> Homo sapien

<400> 51  
 gtccatagga gtctagggga cacacgactc tggggtcacg gggccgacac acttgccagg 60  
 cgggaaggaa aggcagagaa gtgacaccgt caggggggaaa tgacagaaag gaaatcaag 120  
 gccttgcaag gtcagaaagg ggaactcagg ctccaccac agccctgccc caattggcca 180  
 cctccctttt gggaccagca atgt 204

<210> 52  
 <211> 491  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> {1}...{491}  
 <223> n = A,T,C or G

<400> 52  
 acaaagatga cttttatctt ataacaazaa tttgatagtt tttaagggtta gtattgtgka 60  
 gggatatlct caaaagacta aagagataac tcagggtazaa agtttagaat gtataaaaca 120  
 ccatcagaca ggttttttaa aaacaacata ttacaaaatt agacaatcat ccttaaaaaa 180  
 aaaaacttct gtatcaattt ctttctgtca aatgactga ctttaantatt tttaaatatt 240  
 tcaaaacac ttctcaaaa attttcaana tggtagcttt canatgtacc ctccgtccca 300  
 atgttctca gataaataaa tctgttgaga acttaccacc caccacaagc ttcttggggc 360  
 atgcaacagt gtcttttctt tncctttctt tttttttt ttacaggcac agaaactcat 420  
 caattttatt tggataacaa aggggtctcca aattatattg aaaaataaat ccaagttaat 480  
 atcactcttg t 491

<210> 53  
 <211> 484  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(484)  
 <223> n = A,T,C or G

<400> 53  
 acataattta gcagggtctaa ttaccataag atgctattta ttaanaggtn tatgatctga 60  
 gtattaacag ttgctgaagt ttggtatttt tatgcagcat tttcttcttg ctttgataac 120  
 actacagaac cottaaggac actgaaaatt agtaagttaa gttcagaaac attagctgct 180  
 caatcaaatc totacataac actatagtaa ttaaaacgtt aaaaaaagt gttgaaatct 240  
 gcaactagtat anaccgctcc tgtcaggata anactgctt ggaaacagaaa gggaaaaanc 300  
 agctttgant ttctttgtgc tgatangagg aaaggctgaa ttaccttgtt gctctctcct 360  
 aatgattggc aggtcnggta aatnccaasa catattccaa ctcaacactt cttttccnec 420  
 tancttgant ctgtgtattc caggancagg cggatggaat gggccagccc nccgatgttc 480  
 cant 484

<210> 54  
 <211> 151  
 <212> DNA  
 <213> Homo sapien

<400> 54  
 actaaacctc gtgcttctga actccataca gassacggtg ccctccctga acacggctgg 60  
 ccactgggta tactgctgac aaccgcaaca acaaaaaac aaatccttgg cactggctag 120  
 tctatgtcct ctcaagtgc tttttgtttg t 151

<210> 55  
 <211> 91  
 <212> DNA  
 <213> Homo sapien

<400> 55  
 acctggettq tctcgggtg gtcccgggcg cccccacgg tcccagaaac ggacactttc 60  
 gccctccagt ggataclcg gccaaagtcg t 91

<210> 56  
 <211> 133  
 <212> DNA  
 <213> Homo sapien

<400> 56  
 ggccgatgtg cgttggttat atacaaatat gtcattttat gtaagggaact tgagtatact 60  
 tggatttttg gtatctgttg gtgggggga cggtcagga accaataccc catggatacc 120  
 aagggaacac tgt 133

<210> 57  
 <211> 147  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(147)  
 <223> n = A,T,C or G

<400> 57  
 actctggaga acctgagccg ctgctccgcc tctgggatga ggtgatgcan gcnytggcgc 60  
 gactgggagc tgagcccttc cctttgcgcc tgcctcagag gattgttgcc gacntgcana 120  
 tctcantggg ctggatncat gcagggt 147

<210> 58

22

<211> 198  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)..(198)  
 <223> n = A,T,C or G

<400> 58  
 acagggatct aggtttnaag ttattgtnat tgtaaaatac attgaatttt ctgtatactc 60  
 tgatttcata caittatctt ttaaaaaaga tgaattctt aatttttatg ccatctatta 120  
 atttaccat aggttacctt gtaaatgaga agtcattgata gcautgaatt ttaactagtt 180  
 ttgacttcta agtttggt 198

<210> 59  
 <211> 330  
 <212> DNA  
 <213> Homo sapien

<400> 59  
 acaacaaatg ggttctgagg aagtcttctc agcaaaactg gtgatggcta ctgaaaagat 60  
 ccattgaaaa ttatcattaa tgatttttaa tgacaagtta tcaaaaactc actcaatttt 120  
 cactctgtct agcttgctaa aatgggagtt aactctagag caaatatagt atcttctgaa 180  
 tacagtcaat aatgacaaa gccagggcct acaggtggtt tccagacttt ccagaccag 240  
 cagaaggaat ctattttatc acatggatct ccgtctgtgc tcaaaatacc taatgatatt 300  
 tttcgtcttt attggacttc ttigaagagt 330

<210> 60  
 <211> 175  
 <212> DNA  
 <213> Homo sapien

<400> 60  
 accgtgggtg ccttctacat tctgacggc tcttcacca acatctggtt ctacttcggc 60  
 gtcgtgggt ccttctctt catctcctc cagctgggtc tgcctcctga ctttgcgcac 120  
 tcttggaacc agcgtgggt gggcaaggcc gaggagtgc attccctgc ctggt 175

<210> 61  
 <211> 154  
 <212> DNA  
 <213> Homo sapien

<400> 61  
 accccattt tctcctgtg agcagtcctg acttctcact gctacatgat gagggtgaat 60  
 ggttggtgt cttcaacagt atctctcctt ttcggatct gctgagcagg acagcagtc 120  
 tggactgcac agcccgaggg ctccacattg ctgt 154

<210> 62  
 <211> 30  
 <212> DNA  
 <213> Homo sapien

<400> 62  
 ccgtcagacc ctatagttag cgtattaga 30

<210> 63  
 <211> 89  
 <212> DNA  
 <213> Homo sapien

<400> 63

acaagtcatt tcagaccct ttgctcttca aaactgacca tcttttatat ttaatgcttc 60  
ctgtatgaat aaaaatggtt atgtcaagt 89

<210> 64  
<211> 97  
<212> DNA  
<213> Homo sapien

<400> 64  
accggagtaa ctgagtcggg acgctgaatc lgaatccacc aataaataaa ggttctgcag 60  
aatcagtga tccaggattg gtcttggat ctgggt 97

<210> 65  
<211> 377  
<212> DNA  
<213> Homo sapien

<220>  
<221> misc\_feature  
<222> (1)...(377)  
<223> n = A,T,C or G

<400> 65  
acaacaanaa ntcccttctt taggcoactg atggaacct ggaacccct tttgatggca 60  
geatggcgtc ctggccttg acacagcggc tggggtttgg gctntccaa accgcacacc 120  
ccacccctgg tctaccaca nttctggcta tgggctgtct ctgcoactga acatcagggt 180  
tcggtcataa natgaatcc caanqgggac agaggtcagt agaggaagct caatgagaaa 240  
ggtgctgttt gctcagcccq aaaaacagclq cctggcattc gcgcctgaac tatgaacccg 300  
tgggggtgaa ctacccccc angggaatcat gcttggguga tccaanggtg ccuacaggag 360  
gggaggagg agcatgt 377

<210> 66  
<211> 305  
<212> DNA  
<213> Homo sapien

<400> 66  
acgcctttcc ctgagaattc aggggaagaga ctgtgcgctg ccttccctccg ttgttgctg 60  
agaacccgtg tgcacctcc caccatatac accctgctc catctttgaa ctcaaacacg 120  
aggaaactaac tgcacccclq tctctccccc agtccccagt tcacctcca tccctcactt 180  
tctccactc taaggatct caacactgac cagcacaggg gccctgaatt tatgtggttt 240  
ttatatattt lltatcaga tgcactttat gtcatttttt aataaagctc gaagaattac 300  
tggtt 305

<210> 67  
<211> 385  
<212> DNA  
<213> Homo sapien

<400> 67  
actacacaca ctccacttgc ccttgtgaga cactttgtcc cagcaattta ggaatgctga 60  
ggtoggacca gccacatctc atgtgcaaga ttgcccagca gacatcagggt ctgagagttc 120  
cccttttaaa aaaggggact tgcctaaaaa agaagctag ccacgattgt gtagagcagc 180  
tgtgtgtgct tggagattca cttttgagag agttctctc tgagacctga tcttttagagg 240  
ctgggcagtc ttgcacatga gatggggctg gtctgatctc agcaactcct agtctgcttg 300  
cctctcccag ggcacccagcc tggccacacc tgcctacagg gcactctcag atgccatac 360  
catagtttct ctgctagtg accgt 385

<210> 68  
<211> 73  
<212> DNA  
<213> Homo sapien

<400> 68  
acttaaccag atatatttllc aocccagatg gggalattot ttgtasaaaa tgaastaaa 60  
gttttttttaa lgg 73

<210> 69  
<211> 536  
<212> DNA  
<213> Homo sapien

<220>  
<221> misc\_feature  
<222> (1)...(536)  
<223> n = A,T,C or G

<400> 69  
actagtcacag tctgggtgaa ttccattgtg ttgggggctc tcaacctoct ctcttgcagc 60  
tccagctttg tgcctctgct ctgaggagac catggcccag catctgagta cctctgctgt 120  
cctgctggcc accctagctg tggccctggc ctggagcccc aaggaggagg ataggataat 180  
ccgggggtgg atctataaag cagacctcaa tgatgagtgg gtacagcgtg ccttcaactt 240  
cgccatcagc gagtataaca agggccacaa agatgactac tacagacgtc cgttgcgggt 300  
actaagagcc aggcacacaga ccgttggggg ggtgaattac ttcttcgacg tagaggtggg 360  
cogaaccata tgtaccaagt ccagcccaa cttggacacc tgtgccttcc atgaacagcc 420  
agaactgcag aagaaccagt tctgtctttt cagatctctc gaagttccct ggggagaca 480  
gaangtccct ggttgaantc caggtgtcaa gaalactan ggtctggtt cccggc 536

<210> 70  
<211> 477  
<212> DNA  
<213> Homo sapien  
<400> 70

atgaccccta acagggggcc tctcagccct cctaattgacc tccggccctag ccatgtgatt 60  
tcaattccac tccataacgc tctcataact aggcctacta accaaccacac taaccataata 120  
ccaatgatgg cgcgatgtaa cagcagaaag cacataccaa ggccaccaca caccacctgt 180  
ccaaaaaggc cttcgataag ggataatcct atttattacc tcagaagttt ttttcttgcg 240  
aggattttt ctgagccctt taccactcca gcttagcccc taacccccaa ctaggagggc 300  
actggccccc aacaggcato acccogctaa atccctctga agtcccacto ctaaaacat 360  
ccgtattact cgcctcagga gtatcaalca cctgagctca ccatagtota atagaaaaca 420  
aaccgaacca aattattcaw agcaactgct attacaattt lactgggtct ctatttt 477

<210> 71  
<211> 533  
<212> DNA  
<213> Homo sapien

<220>  
<221> misc\_feature  
<222> (1)...(533)  
<223> n = A,T,C or G

<400> 71  
agagctatag gtacagtgtg atctcagctt tgcaaacaca tttttatcat agatagtact 60  
aggtattaat agatatgtaa agaaagaaat cacaccatta ataattgtta gattgggtta 120  
tgtgatttta gtggtatttt tggcaccctt atatattgtt tccaaacttt cagcagtgat 180  
attatttcca taacttaaaa agtgggtttg aaaaagaaaa tctcagcaa gctctctatt 240  
taaatzaag tttgtcatct ttasaaatac agcaatatgt gactttttta aaaaagctg 300  
aatagggtgt gacctacta ataatlctta gaalacatt taaaacatc ggtacctca 360  
agtcagtttg ccttgaaaaa talcaaatat aactctttag gaattgtaca laaaagaatg 420  
cttctgaatt ttggaatlang aggttccclc ctcaatttly latllttaa agttacatgg 480  
taaaaaaaa aaltcacaac agtatataag gctgtaaaat gaagaattct gcc 533

<210> 72

<211> 511  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(511)  
 <223> n = A,T,C or G

<400> 72  
 tatttcggaa aacacaccca catcattcaa ctanccaaaga anactgcttc agggcgtgta 60  
 aastgaagg cttccaggca gttatctgat taagagascac taaggaggga ecaaggctaa 120  
 aagccgcagg stgtctacac tatancaggc gctatttggg ttggctggag gagctgtgga 180  
 aascctggan agattggtgc tgganacgc cgtggctatt cctcattgtt attacanagt 240  
 gaggttctct gtgtgccccac tggtttgaaa accgttctnc aataatgata gaatagtaca 300  
 cacatgagaa ctgaaatggc ccaaacccag aaagaaagcc caactagatc ctccagaaac 360  
 gcttctaggg acaataaccg atgaagaaaa gatggcctcc ttgtgcccc gtctgttatg 420  
 atttctctcc attgcagcna naaacccggtt cttctaagca aacncagggtg atgatggcna 480  
 aaatacacc cctcttgaag naccnnggagg a 511

<210> 73  
 <211> 499  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(499)  
 <223> n = A,T,C or G

<400> 73  
 cagtgcacgc actggtgcca gtaccagtac caataacagt gccagtgccg gtgccagcac 60  
 cagtgggtggc ttccagtgtg gtgccagcct gaccgccact ctccacatttg ggctcttcgc 120  
 tggccttggg ggagctggtg ccagcaccag tggcagctct ggtgcctgtg gtttctccta 180  
 caagtggat tttagatatt gttaatcctg ccagtcttct tcttcaagcc aggggtgcac 240  
 ctccagaaac tactcaaac agcactctag gcagccacta tcaatcaatt gaagttgaca 300  
 ctctgcatta aatctatttg ccatttctga aaaaaaaaaa aaaaaaaggg cggccgctcg 360  
 antctagagg gcccgtttaa acccgctgat cagcctcgac tgtgcctctt anttgcacgc 420  
 catctgttgt ttgccccctc cccgntgctt tecttgaccc tggaaagtgc caatccact 480  
 gtcttttct aantaatat 499

<210> 74  
 <211> 537  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(537)  
 <223> n = A,T,C or G

<400> 74  
 ttctcatagga gaacacactg aggagatact tgaagaattt ggattcagcc gcgaagagat 60  
 ttatcagott auctcagata aaatcattga aagtaataag gtaaaagcta gtctctaact 120  
 tccaggccca cggctcaagt gaatttgaat actgcattta cagtgtagag taacacataa 180  
 cattgtatgc atggaaacat ggaggaaacag tattacagtg tccctaccact ctaatcaaga 240  
 aaagaattac agactctgat tctacagtga tgattgaatt ctaaaaatgg taatcattag 300  
 ggcttttgat ttataaact ttgggtactt atactaatt atggtagtta tactgccttc 360  
 cagtttgcct galatakttg ttgccttaa gattcttgac ttatattttg aatgggttct 420  
 actgaaan gaatgatata ttcttgaaga catcagata cattcattta cactottgat 480  
 tctacactgt agaaaatgaa ggaaatgcc caaat:grat ggtgataaaa gtccct 537

<210> 75  
 <211> 467  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(467)  
 <223> n = A, T, C or G

<400> 75  
 caaanecaat tgttcasaag atgcaaatga tacactactg ctgcagctca caaacacctc 60  
 tgcataattac acgtacctcc tcttgcctct caagtagtgt ggtctatatt gccatcatca 120  
 cctgctgtct gcttagaaga acggctttct gctgcaangg agagaaatca taacagacgg 180  
 tggcacaagg aggcacatct ttcctcatcg gttattgtcc ctagaagcgt ctcttgagga 240  
 tctagttggg ctttctttct gggtttgggc catttcantt ctcatgtgtg tactattcta 300  
 tcattattgt ataacggttt tcaaacnngt gggcancnag agaacctcac totgtaataa 360  
 caatgaggaa tagccaaggt gatctccagc accaatctc tccatgttnt tccagagctc 420  
 ctccagccaa cccaatagc cgtctctain gtgtagaaca tccctgn 467

<210> 76  
 <211> 400  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(400)  
 <223> n = A, T, C or G

<400> 76  
 aagctgacag cattcgggoc gagatgtctc gctcogtggc cttagctgtg ctccgctac 60  
 tctctctttc tggcctggag gctatccagc gtactccaaa gattcaggtt tactcacgtc 120  
 atccagcaga gaattgaaag tcaaatctcc tgaattgcta tgtgtctggg tttcatccat 180  
 ccgacattga agttgactta ctgaagaatg gagagagaat tgaaaaagtg gaggattcag 240  
 acttgtcttt cagcaaggac tggctctttc atctcttgta ctacactgaa ttacccccca 300  
 ctgaaaaaga tgagtatgoc tgcogtgtga accatgtgac tttgtcacag cccaaatnag 360  
 tttagtggga tctanacatg taagcagcan cctgggaggt 400

<210> 77  
 <211> 240  
 <212> DNA  
 <213> Homo sapien

<400> 77  
 ctggagtgc ttggtgtttc aagccctgc aggaagcaga atgcaccttc tgaggcacct 60  
 ccagctgccc cggcggggga tgcgaggctc ggagcacctc tgcocggctg tgattgtctc 120  
 caggcaactgt tcatctcagc tttctgttcc ctttgcctcc ggcaagcgt tctgtgaaa 180  
 gttcatatct ggagcctgat gtcttaacga ataaaggctc catgtctccac ccgaaaaaaa 240  
 aaaaaaaa 246

<210> 78  
 <211> 201  
 <212> DNA  
 <213> Homo sapien

<400> 78  
 actagtccag tctgttggaa ttccattgtg ttggggccca cacaatggct acctttaaca 60  
 tccaccagac cccgcctgc cctgcccna cgtctctgtt aacgacagta tgatgcttac 120  
 totgtacttc ggaaactat tttatgtaat taatgtatgc tttcttgttt ataatgcct 180  
 gattttaaaa aaaaaaaaaa a 201



<210> 79  
 <211> 552  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature  
 <222> {1}...{552}  
 <223> n = A,T,C or G

<400> 79  
 tccttttggg aggtttttga gacaccccta gacctaact gtgtcacaga ottctgaatg 60  
 ttttaggcagt gctagtaatt tcttcgtaat gattctgtta ttactttcct attctttat.t 120  
 cctcttttct ctgaagatta atgaagttga aaattgaggt ggataaatat aaaaaaggtag 180  
 tgtgatagta taagtatcta agtgcagatg aaagtgtgtt atatatatcc attcacaatt, 240  
 atgcaagtta gtaattactc aggggttaact aaattacttt aatattgctgt tgaacctact 300  
 ctgttccttg gctagaaaaa attataaaca ggactttgtt agtttgggaa gccaaattga 360  
 taatattcta tgttctaaaa gtigggctat acataaanta tnaagaaata tggattttta 420  
 ttcccaggaa tatgggggtt atttatgaat antacccggg anagaagttt tgantnaaac 480  
 cngttttggg taatacgtta atattgctctn aatnaacaag gcntgactta ttccaaaaa 540  
 aaaaaaaaaa aa 552

<210> 80  
 <211> 476  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature  
 <222> {1}...{476}  
 <223> n = A,T,C or G

<400> 80  
 acagggattt gagatgctaa ggccccagag atcgtttgat ccaacccctct tattttcaga 60  
 ggggaaatg gggcctagaa gttacagagc atctagctgg tgcgctggca cccctggcct 120  
 cacacagact cccgagttagc tgggactaca ggcacacagt cactgaagca ggcctgtgtt 180  
 gcaattcagc ttgccacctc caacttaaac attcttcata tgtgatgtcc ttagtcacta 240  
 aggttaact ttcccaccca gaaagggcaa cttagataaa atcttagagt actttcatac 300  
 tcttctaagt cctcttcagc cctcactttg agtctcctt ggggggttgat aggaantntc 360  
 kcttggttll ctcaataaaa tctctatcca tctcatgtt aatttggtac gcntaanaat 420  
 gctgaaaaaa ttaaatgtt ctgglttcnc tttaaaaaaa aaaaaaaaaa aaaaaa 476

<210> 81  
 <211> 232  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature  
 <222> {1}...{232}  
 <223> n = A,T,C or G

<400> 81  
 tttttttttg talgcctctn ctgtggngtt attgttgttg ccacccctga ggagcccagt 60  
 ttctttctga tctttctttt ctgggggato ttcttggttc tgcctctcca ttccagacct 120  
 ctcatccca tcttgcaatt ttgttagggt tggaggcgt ttcttggtag cccctcagag 180  
 acloagtcag cgggaata g tcttaggggt ggggggttct gcaagccggc ct 232

<210> 82  
 <211> 383  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(383)  
 <223> n = A, T, C or G

<400> 82

aggcgggagc	agaagctaaa	gccaaagccc	aagaagagtg	gcagtgccag	cactgggtgcc	60
agtaccagta	ccaataacat	gccagtgcc	gtgccagcac	cagtgggtggc	ttcagtgcctg	120
gtgccagcct	gaccgccact	ctcacatttg	ggctcttcgc	tggccttggg	ggagctgggtg	180
ccagcaccag	tggcagctct	gggtccctgtg	gtttctccta	caagtggat	tttagatatt	240
gttaatcctg	ccagtctttc	tottcaagcc	aggttgcatc	ctcagaaacc	tactcaaac	300
agcactctng	gcagccacta	tcatacaatt	gaagttgaca	ctctgcatta	aattctatttg	360
ccatttcaaa	aaaaaaaaaa	aaa				383

<210> 83  
 <211> 494  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(494)  
 <223> n = A, T, C or G

<400> 83

accgaattgg	gaccgctggc	ttataagoga	tcattgtctc	cagtattacc	tcaacgagca	60
gggagatcga	gtctatacgc	tgaagaaatt	tgaccgatg	ggacaacaga	cctgtctcagc	120
ccatcctgct	cggttctccc	cagatgacaa	atactctcga	caccgaatca	ccatcaagaa	180
acgcttcaag	gtgtctatga	cccagcaacc	ggcctctgtc	ctctgagggt	ccttaaaactg	240
atgtcttttc	tggcaccctgt	taccctctgg	agactcccta	accnaactct	tggactctgtg	300
agcctctgat	ccttttttgc	agccatactc	lktggctctc	agctctctct	ggcatttcat	360
tatgtctgtg	tgaggcactc	atggtggcat	caccatnna	gggaacacat	ttgatttttt	420
tttctcatat	tttaaatcac	naccagaata	nttcaqaata	aattgaattga	aaactcttta	480
aaaaaaaaaa	aaaa					494

<210> 84  
 <211> 380  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(380)  
 <223> n = A, T, C or G

<400> 84

gttggtagcc	tatggcgtgg	ccagggaagg	qctcttgagg	ccggggacag	tgaattccca	60
agtatcctgc	gcggcgtctt	ctaccglccc	tacctgcaga	tcttcgggca	gattccccag	120
gaggacatgg	acgtggccct	catggagcac	agcactgct	cgicggagcc	cggcttcttg	180
gcacaccctc	ctggggccca	ggcgggcacc	tgcgtctccc	agtatgcnaa	ctggcctggg	240
gtgctgclcc	tgctcatctt	cctgctcgtg	gccaaactcc	tgtctggtcc	ttgctcattg	300
ccatgttcag	ttacacattc	ggcaaaagtac	agggcaacag	cnatctctac	tgggaaggcc	360
agcqltnccg	cctcatccgg					380

<210> 85  
 <211> 481  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_f ature

&lt;222&gt; {1}...{481}

&lt;223&gt; n = A, T, C or G

&lt;400&gt; 85

gagttagctc	ctccacaccc	ttgatgaggt	cytctgcagt	ggcctctcgc	ttcataccgc	60
tnccatcgte	atactgtagg	tttgcaccca	cctcctgcat	cttggggcgg	ctaataatcca	120
ggaaactctc	aatcaagta	ccgtcnatna	aacctgtggc	tggttctgtc	ttccgctcgg	180
tgtgaaagga	tctccagaag	gagtgtctga	tcttcccccac	acttttgatg	actttattga	240
gtcgattctg	catgtccagc	aggaggttgt	accagctctc	tgacagttag	gtcaccagcc	300
ctatcatgcc	nttgaacgtg	ccgaagaaca	cagagccttg	tgtggggggt	gnagtctcac	360
ccagattctg	cattaccaga	nagccgtggc	aaaaganatt	gacaactcgc	ccaggnggaa	420
aaagaacacc	tcttgggaag	gctngccgct	cctcgtccent	tggtggnggc	gcntnccctt	480
t						481

&lt;210&gt; 86

&lt;211&gt; 472

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc feature

&lt;222&gt; {1}...{472}

&lt;223&gt; n = A, T, C or G

&lt;400&gt; 86

aacatcttcc	tgtataatgc	tgtgtaatat	cgatccgatin	ttgtctgctg	agaattcatt	60
acttggaaaa	gcaccttnaa	gcctggacac	tggtattaaa	attcacaata	tgcaacacct	120
taaacagtgt	gtcaatctgc	tcctttaact	tgatcatcac	agtcctggaa	taagggtatg	180
ccctattcac	acctgttaaa	agggcgctaa	gcatttttga	ttcaacatct	ttttttttga	240
cacaagtcog	aaaagaagca	aagtaaacag	ttnttaactt	gttggcccat	tcactttctt	300
catgggacag	agccatttga	tttaaaaaag	aaattgcata	atattgagct	ttgggagctg	360
atatnlgagc	ggaagantag	cctttctact	lcaccagaca	caactccttt	catattggga	420
tgtaacnna	agttctgtct	cttaccagag	ggatgcttct	gtggcaattc	tg	472

&lt;210&gt; 87

&lt;211&gt; 413

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc feature

&lt;222&gt; {1}...{413}

&lt;223&gt; n = A, T, C or G

&lt;400&gt; 87

agaaaccagt	atctctnaaa	acnacctctc	ataccttqlg	gacctaattt	tgtgtgcgtg	60
tgtgtgtgcy	cgcataattat	atagacagge	acalcctttt	tacttttgta	aaagcttatg	120
cctcttttgt	atctatatct	gtgaaagtct	taattgatctg	ccataatgtc	ttggggacct	180
ttgtcttctg	tgtaaatggt	actagagaaa	acccctatnt	tatgagtcaa	tctagttngt	240
tttatccgac	atgaaggaaa	tttccagatn	acacacttne	caaactctcc	cttgactagg	300
ggggacaaa	aaaagcanea	ctgaacatne	gasacaattn	cctgggtgaga	aattncataa	360
acagaaaltg	ggtngtatat	tgaaanang	catcattnaa	acgttttttt	ttt	413

&lt;210&gt; 88

&lt;211&gt; 448

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc feature

&lt;222&gt; {1}...{448}

&lt;223&gt; n = A, T, C or G

<400> BB  
 cgcagcgggt cctctctatc tagctccagc ctctcgctg cccactccc cgcgtccgc 60  
 gtccatagccn acctggccg ggcctctgcg cgcctcgtg ctctgctgg ccactcggc 120  
 cgtggccctg gcctgagcc cgcggcccg ctccagtccc ggcaagccg cgcgcctgg 180  
 gggaggccca tggaccocgc gtggaagaag aaggtgtgcg gcgtgcactg gactttgccc 240  
 tcggcnanta caacaaaccc gcaacnaact ttaccnagcn cgcgtgcag gtgtgccc 300  
 cccaancaaa ttgttactng gggtaantaa ttcttggaag ttgaacctgg gccaaacnng 360  
 tttaccagaa ccnagccaat tngaacaatt nccctccat nacagccct tttaaaagg 420  
 gaancantcc tgnctctttt caaatitt 448

<210> 89  
 <211> 463  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(463)  
 <223> n = A,T,C or G

<400> 89  
 gaattttgtg cactggccac tgtgatggaa ccattgggcc aggatgcttt gagtttatca 60  
 gtagtgattc tgcctaaagt ggtgttgtaa catgagtatg taaaatgtca aaaaatttagc 120  
 agaggctctag gtctgcatac cagcagacag ttgtccgtg tattttgtag ccttgaagtt 180  
 ctccagtaca agttntttct gatgcgaagt tctnattcca gtgttttagt cctttgcctc 240  
 tttnatgttn agacttgcct ctctnaaatt gcttttgtnt totgcaggta ctatctgttg 300  
 ttttaacaaa tagaannact tctctgcttn gaanatttga atatcttaca tctnaaaatn 360  
 aattctctcc ccattannaa acccangccc ttggganaat ttgaaaaang gntccttcnn 420  
 aattcnnana anttcagntc tcatccaca naacngganc ccc 463

<210> 90  
 <211> 400  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(400)  
 <223> n = A,T,C or G

<400> 90  
 agggattgaa ggtctntnt actgtoggac tgttcancca ccaactctac aagttgctgt 60  
 ctccactca ctgtctgtca gcntnttaac ccagactgta tottcataaa tagcccaat 120  
 tottcaccay tccactcttc taggaccttt ttggattcag ttagtataag ctcttccat 180  
 tctttgtta agacttccat tggtaaagtc ttaagttttg tagaaaaggaa tttattgct 240  
 cgttctctaa caatgtctc tcttggaagt atttggtga acaacccacc tnaagtcct 300  
 ttgtgcater attttaata tacttaata ggcattggtt cactaaggtta aattctgcaa 360  
 gagtcatctg tctgcaaaag ttgcgttagt atctctgcaa 400

<210> 91  
 <211> 480  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_featur  
 <222> (1)...(480)  
 <223> n = A,T,C or G

<400> 91  
 gagctcggat ccaataatct ttgtctgagg gcagcacaca tatncagtc catgnaact 60

ggtctacccc	acatggggagc	agcatgcogt	agntatataa	ggtcattccc	tgagtcagac	120
atgcctcttt	gaactaccgtg	tgccagtget	ggtagattctc	acacacotcc	nncogctctt	180
tgtggaaaaa	ctggcacttg	netggaaacta	gcaagacatc	acttacaaat	tcaccc cga	240
gacacttgaa	aggtgtaaca	aagcgactct	tgcatgtgtt	tttqlccctc	cggcaccagt	300
tgtcaatact	aacccogctgg	tttgctccca	tcacattigt	gatctgtage	tcggaalaca	360
tctcctgaca	gtactgaaga	acttcttctt	ttgtttcaaa	agcaactctt	ggtgcctgtt	420
ngatcaggtt	cccatctccc	agtcogaatg	ttcacatggc	atatnttaet	tcccacaaaa	480

<210> 92  
 <211> 477  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature  
 <222> (1)...(477)  
 <223> n = A,T,C or G

<400> 92	
atacagccca	natccracca cgaagatgag cttgttgact gagaacctga tgcgggtcact 60
ggteccgctg	tagcccccagc gactctccac ctgctggaaag cggttgatgc tgcactcctt 120
cccacgcagg	cagcagcggg gcoggtcaat gaactccact cgtggettg ggttgacggg 180
taantgcagg	aagaggctga ccacctcgcg gtccaccagg atgcccgaet gtgogggacc 240
tgacgcgaaa	ctcctcgatg gtcctgagcg ggaagcgaat gangcccagg gccttgccca 300
gaaccttcog	cctgtttctt gggtcaact gcagctgctg ccgttnacac tggccctogg 360
accagcggac	aaacggcggt gaacagccgc acctcacgga tgcacantgt gtccgctctc 420
aggaacggcn	ccagcgtgtc caggtcaatg tcggtgaanc ctccgcgggt aatggcg 477

<210> 93  
 <211> 377  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature  
 <222> (1)...(377)  
 <223> n = A,T,C or G

<400> 93		
gacgggctgg	accttgctc gcattgtgt gotggcagga ataccttggc aagcagctcc 60	
agtcogagca	gccccagacc gctgcggccc gaagctaagc ctgctctgg ccttccctc 120	
cgcctcaatg	cagaaccant agtgggagca ctgtgtttag agliaagagt gaacactgtt 180	
tgatttact	tggyaatttc ctctgtttata tagcttttcc cactgtctat ttccaaacaa 240	
caacacacaa	alaacatgtt tgcctgtttna gttglatcaa agtonglqal tckqlatnta 300	
aaqaaalal	tactgttaca tatecigelt gcaanttclg tattttattgg tncctctgga 360	
atcaatctat	tattaaa	377

<210> 94  
 <211> 495  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature  
 <222> (1)...(495)  
 <223> n = A,T,C or G

<400> 94	
ccctttgagg	ggttagggtc cagttcccag tggagaaac aggcacaggag aantgcgtgc 60
cgagctgang	cagatttccc acagtgaacc cagagccctg ggtctatagtc tctgacccct 120
ccaaggaaag	accacettct ggggcacatg gctggagggc aggcacctaga ggcacccagg 180
gaaggcccaa	ttccqagact gttcccagag gagggaaggga aggggctctg tctgcccccc 240

acgaggaana	ggccctgant	cctgggates	nacacccctt	caagtgtatc	cccacacaaa	300
tgcaagctca	ccaagggtccc	ctctcagter	cttccctaca	ccctggaagg	ncactggccc	360
acacccaccc	agancancca	cccgcctatg	ggaatgttct	caagggaatcg	cngggcaacg	420
tggactctng	lcccnnaagg	gggcagaate	tccaatagan	ggahngasc	cttgcctnana	480
aaaaaaaaaa	aaaaa					495

&lt;210&gt; 95

&lt;211&gt; 472

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(472)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 95

ggttacttgg	tttcattgcc	accatttagt	ggatgtcatt	tagaaccatt	ttgtctgctc	60
cctctggaag	ccttgcgcag	agcggacttt	gtaattgttg	gagaataact	gctgaatttt	120
tagctgtttt	gagttgatto	gcacuaetgc	cccacacac	aatctgaaa	ctatttnact	180
tatttattat	cttgtgaaa	gtatacaatg	aaaattttgt	tcalautgt	ttatcaagt	240
atgatgaaa	gcaatagata	tatattcttt	tattatgttn	aattatgatt	gcattatta	300
atcgccaaa	tgtggagtgt	atgtctttt	cacagtaata	tatgccitt	gtaccltcc	360
tkggttattt	tattgtaaa	gaattacaaa	attcttaatt	taagaaaatg	glangttata	420
tttatttcan	taattctttt	ccttgtttac	gttaattttg	aaaagaatgc	at	472

&lt;210&gt; 96

&lt;211&gt; 476

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(476)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 96

ctgaagcatt	tcttcaaat	tnctacttt	tgctattgal	acclgtagta	agttgacaat	60
gtgggtgaa	ttcaaaatla	tctgttaact	ctacagltt	tactttctcc	cccagctctt	120
ttttaactca	tgatltttac	acacacaa	cagaacttat	tctatagctt	ctaagctctt	180
atctttcaca	gtgatgatg	aaagagtcct	ccagtgtctt	gngcanaatg	ttctagntat	240
agctggatag	atacngtggg	agttctataa	actcatacct	cagtgggact	naaccaaaat	300
tgtgttagtc	tcaattccta	ccacactgag	ggagcctccc	aaatcactat	attcttctct	360
gcaggtactc	ctccagaaaa	acngacaggg	caggcttgca	tgaaaaagtn	acatctgcgt	420
tacaaagtct	atcttctcca	nangtctgtn	aaggaaacaa	ttaattctct	agcttc	476

&lt;210&gt; 97

&lt;211&gt; 479

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(479)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 97

actttttcta	atgctgatat	gattcttgagt	ataagaatgc	atatgtcact	agaatggata	60
aaataatgct	gcaaaactta	tgttcttatg	caaatggaa	cgctaattga	acacagctta	120
caatcgcaaa	tcaaaactca	caagtgcctca	tctgtgttag	atttagtgta	ataagactta	180
gattgtgctc	cttcggatat	gattgtttct	canatcttgg	gcaatnttcc	ttagtcaaat	240
caggtactca	gaattctggt	attggatatn	tgagagcatg	aaatttttaa	naatacactt	300

gtgattatna aattatcac aattttcact	tatacctgct atcagcagct agaaaaacat	360
ntnnttttta natcaaagta ttttgtgtt	ggaantgttn aattgaaatc tgaatgtggg	420
ttonatctta ttttttccn gacnactant	tnctttttta ggnct ttc tganccatc	479

<210> 98  
 <211> 461  
 <212> DNA  
 <213> Homo sapien

<400> 98		
agtgacttgt cctccaacaa aaccccttga	tcaagtttgt ggcactgaca atcagaccta	60
tgtatgttcc tgtcatctat tgcctactaa	atgcagactg gaggggacca aaaaggggca	120
tcaactccag ctggattatt ttggagcctg	caaactctatt cctacttgta cggactttga	180
agtgattcag ttctctctac ggatgagaga	ctggctcaag aatatctca tgcagcttta	240
tgaagccact ctgaacacgc tggttatcta	gatgagaaca gagaataaa gtcagaaaat	300
ttacctggag aaaagaggct ttggctgggg	accatcccat tgaaccttct ctttaaggact	360
tttaagaaaa ctaccacatg ttgtgtatcc	tggtgccggc cgtttatgaa ctgaccaccc	420
tttgaataaa tcttgacgct cctgaacttg	ctcctctgog a	461

<210> 99  
 <211> 171  
 <212> DNA  
 <213> Homo sapien

<400> 99		
gtggcgcggc gcagggtgtt cctcgtaccg	caggggcccc tcccttcccc aggggtccct	60
cggcgctctc gggggcccca ggaggagcgg	ctggcgggtg gggggagtgt gaccacccct	120
cgggtgagaaa agccttctct agcgatctga	gaggcgtgcc ttgggggtac c	171

<210> 100  
 <211> 269  
 <212> DNA  
 <213> Homo sapien

<400> 100		
cggcgcgaag tgaactcua gctggggcgg	tggggcgaag gattctgcca gcagttggtc	60
cgaactgagac gaggcgggcg ggcacagtcg	cagggtgcagc gggggcgctt ggggtcttgc	120
aaggctgagc tgacgncga ggggtcgtgt	caggtccrac gaccttgacg ccgtcgggga	180
cagccgggac agagcccggt gaagcgggag	gcctcgggga gcccctcggg aaggcgggcc	240
cagagagatc gcaggtgcag gtggccgcc		269

<210> 101  
 <211> 405  
 <212> DNA  
 <213> Homo sapien

<400> 101		
ttttttttt ttttggaaac taatgcgagc	acagcaggto agcaacaaqt ttattttgca	60
gctagcaagg taacagggtg gggcatgggt	acatgttcaq gtcaacttcc ttltctgttg	120
ttgattgggt tgtttttatg ggggcggggg	ggggcagggg aaacgaagca aataacclgg	180
agtgggtgca cccctccctgt agaacclgg	tacaaggtt ggggcagttc accctggtctg	240
tgaacgltcat tttcttgaca tcaclgttat	tagaagtcag gatattcttt agagagtcga	300
ctgttctggg gggagattag ggtttcttgc	caaactcaac aaatccact gaaaaagttg	360
galqatcagt acgaatcccg aggcataatc	tcatatcggt ggcca	405

<210> 102  
 <211> 470  
 <212> DNA  
 <213> Homo sapien

<400> 102		
ttttttttt tttttttttt tttttttttt	ttttttttt tttttttttt	60

ggcacttaat	ccattttttat	ttcaaaatgt	ctacaaattt	aatccattta	tacgggtattt	120
tcaaaatcta	aattatttcaa	attaguccaa	locttaccas	ataatcccc	aaaatcaaaa	180
atatacttct	ttcagcaaac	ttgttacata	aatcaaaaaa	atatafacgg	ctgggtgtttt	240
caaagtacaa	ttatcttaac	autgcaaacu	tttcaaggaa	ctaaaataaa	aaaacaacact	300
ccgcaaaagt	taaagggaac	aacaaattct	tttaccacac	cattataaaa	atcatatctc	360
aatctttagg	ggaatatata	cttcaacagg	gatcttaact	tttaactcact	ttgtttatttt	420
ttttaaacca	ttgttttggc	ccacacacat	ggaalcccc	ctggactagt		470

<210> 103  
 <211> 581  
 <212> DNA  
 <213> Homo sapien

<400> 103						
tttttttttt	ttttttttga	ccccctctt	ataaaaaaca	agttaccatt	ttattttact	60
tacacatatt	tattttataa	ttggtattag	atattcaaaa	ggcagctttt	aaaatcaaac	120
taaatggaaa	ctgccttcaa	tacataattc	ttaggaaatta	gottaaatc	tgcctaaagt	180
gaaaatcttc	tctagctctt	ttgactgtaa	atttttgact	cttgtaaaac	atccaaattc	240
attcttcttg	tctttaaaat	tatctaattc	ttccattttt	tcctatttcc	aagtcasatt	300
gcttctctag	cctcatcttc	tagctcttat	ctactattag	taagtggctt	tttloctaaa	360
agggaataca	ggaagagaaa	tggcacacaa	aacaaacatt	ttatattcat	atttctacct	420
acgttaataa	aatagcattt	tgtgaagcca	gctcaaaaga	aggttagat	ccttllalqt	480
ccattttagt	cactaaacga	tatcaaatgt	ccagaatgca	aaaggtllqt	qaacatttat	540
tcaaaagcta	atataagata	tttcaacatac	tcctctllct	q		581

<210> 104  
 <211> 578  
 <212> DNA  
 <213> Homo sapien

<400> 104						
tttttttttt	tttttttttt	tttttctctt	cttttttttt	gaaatgagga	togaqttttt	60
cactctctag	atagggcatg	aagaaaaactc	atctttccag	ctttaaanta	acaatcaaat	120
ctcttatgct	atatcatatt	ttaaagttaa	ctaagtagtc	actggcttat	cttctcttga	180
aggaaatctg	ttcattcttc	tcattcatat	agttatatca	agtactacct	hgcataattga	240
gagggtttttc	ttctctatatt	acacatatat	ttccatglga	attlqlatca	aaccttttatt	300
ttcatgcaaa	ctagaaaaata	atgtttcttt	tgcataagag	agagagaacaa	tatagcatta	360
caaaactgct	caaattgttt	gttaagtatt	ccat,tatcat	tagttggcag	gagctaatac	420
aatcacatt	tacgacagca	ataataaaaac	tgaagtacca	gttaaatatc	caaaaataatt	480
aaaggaaact	ttttagcctg	qqlataakta	gctaattcac	tttacaagca	tttattagaa	540
tgaattcaca	tgttattatt	cctagcccaa	cacaatgg			578

<210> 105  
 <211> 538  
 <212> DNA  
 <213> Homo sapien

<400> 105						
tttttttttt	tttttcagta	ataatcagaa	caatatattat	tttlatattt	aaaattccta	60
gaaaagtgcc	ttacatttaa	taaaagtttg	tttctcaaaq	tgtccagagg	aattagatat	120
gtcttgaaca	ccaatattaa	tttgaggaaa	ataacacaaa	alacalttaq	taattatttt	180
aagatcatag	agcttgttaq	tgaaaagata	aaalltgacc	tcagaaactc	tqagcattaa	240
aaatccacta	ttagcaaaata	nattactatg	gaattcttgc	tttaattttg	tgatgaatat	300
gggggtgtcac	tggtaaaccu	acacattctg	aaggatcacat	tacttagtga	tagattctta	360
tgtacttttg	taatacgtgg	atatgagttg	acaagtcttct	ctttcttcaa	tcttttaagg	420
ggcgagaaaat	gaggaagaaa	agaaaaggaat	lccgcatact	gttctttcta	tgggaaggatt	480
agatatgttt	cctttgccc	tattaaaaaa	ataatcaatgt	ttactactag	tgaaccac	538

<210> 106  
 <211> 473  
 <212> DNA  
 <213> Homo sapien



&lt;400&gt; 106

tttttttttt	tttttttagtc	aagttttctat	ttttattata	attaaagtc	tgttcatttc	60
attttattagc	tctgcaactt	acatatttaa	attaaagaaa	cgttttagac	aactgtacaa	120
tttataaatg	taagggtgca	ttattgagta	atataattcct	ccaagagtg	atgtgtccct	180
tctccaccca	actaatgaa	agcaacatta	gtttaatttt	attagtagat	atcacctgct	240
gcaaacgcta	attctcttct	ccatcccat	gtgatattgt	gtatatgtgt	gagttggtag	300
aatgcacac	aatctacat	caacagcaag	atgaaagctag	gctgggttt	cgggtgaaat	360
agactgtgtc	tgltcgaatc	aatgtgtctg	acctatcctc	ggtggcaaga	actcttcgaa	420
ccgtctctc	aaaggcgctg	ccacaktgt	ggtcttttgc	acttgtttca	aaa	473

&lt;210&gt; 107

&lt;211&gt; 1621

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 107

cgccatggca	ctgcagggca	tctcggtcat	ggagctgtcc	ggcctggccc	cgggcccgtt	60
ctgtgctatg	gtcctggctg	acttcggggc	gcgtgtggtg	cgcgtggacc	ggcccggctc	120
ccgctacgac	gtgagccgct	tggcccgggg	caagcgctcg	ctagtgtctg	acctgaagca	180
gcccggggga	gcccgcgtgc	tcggcgctct	gtgcaagcgg	tggatgtgc	tgtggagcc	240
cttcggccgc	ggtgtcatgg	agaaactcca	gctgggccc	gagattctgc	agcgggaaaa	300
tccaaggctt	atttatgcca	ggctgagtg	atttggccag	tcagggaagct	tctgcgggtt	360
agctggccac	gatatacaact	atttggcttt	gtcaggtgtt	ctctcaaaaa	ttggcagaa	420
tgggtgagaat	cogtatgccc	cgctgaatct	cctggctgac	tttgcgtgtg	gtggccttat	480
gtgtgcactg	ggcattataa	tggctctttt	tgaccgcaca	cgcactgaca	agggtcaggt	540
cattgatgca	aatatgggtg	aaggaaacagc	atatttaagt	tctttctgt	ggaaaaactca	600
gaaatcgagt	ctgtgggaag	cacctcgagg	acagaacatg	ttggctgglg	gaqcaccttt	660
ctatacgact	taeuygacag	cagatgggga	attcctggcl	qktgggcca	tagaaaccca	720
gttelacgag	ctgctgafna	aaggauttgg	actaaagctc	gatgsacttc	ccaatcagat	780
gagcatggat	gattggccag	aaatgaagaa	gaagtgttga	gatgtatttg	caaagaagac	840
gaaggcagag	tgggtgtcaaa	tctttgacgg	cacagatgoc	tgtgtgactc	cggttctgac	900
ttttgaggag	gttgttcatc	atgatcacaa	caaggaaagg	ggtcgttta	tcaccagtga	960
ggagcaggac	gtgagccccc	gocctgcacc	tctgtctgta	aacaccccag	ccatcccttc	1020
tttcaaaagg	gaccccttca	taggagaaca	cactgaggag	atacttgaag	aatttggatt	1080
cagccgcgaa	gagatttato	agcttaactc	agataaaatc	atfgaaagta	ataaggtaaa	1140
agctagtctc	taacttccag	gcccacgggt	caagtgaatt	tgaatactgc	atttacagt	1200
tagagtaaca	cataacattg	tatgcattga	aacatggagg	aacagtatta	cagtgtctca	1260
ccactctaat	caagaaaaga	attacagact	ctgattctac	agtgtatgatt	gaattclaaa	1320
aatggttatc	attagggttt	ttgatttata	aaactttggg	tacttatact	aaattatggt	1380
agttattctg	ccttcaggtt	tgttgatat	atttgttgat	atlaagcttc	ctgacttata	1440
ttttgaaatg	gttctagtga	aanaggaatg	atatalctct	caagacatcg	alatacattt	1500
atttccactc	ttgattctac	aatgtagaaa	atgaggaaat	gccacaaatt	gtatggtgat	1560
aaaagtcacg	tgaacacaaa	aaacaaacaa	aaacaaacaa	aaacaaacaa	aaacaaacaa	1620

&lt;210&gt; 108

&lt;211&gt; 382

&lt;212&gt; PRT

&lt;213&gt; Homo sapien

&lt;400&gt; 108

Met	Ala	Leu	Gln	Gly	Ile	Ser	Val	Met	Glu	Leu	Ser	Gly	Leu	Ala	Pro
1				5				10						15	
Gly	Pro	Phe	Cys	Ala	Met	Val	Leu	Ala	Asp	Phe	Gly	Ala	Arg	Val	Val
			20					25					30		
Arg	Val	Asp	Arg	Pro	Gly	Ser	Arg	Tyr	Asp	Val	Ser	Arg	Leu	Gly	Arg
			35				40					45			
Gly	Lys	Arg	Ser	Leu	Val	Leu	Asp	Leu	Lys	Gln	Pro	Arg	Gly	Ala	Ala
			50			55				60					
Val	Leu	Arg	Arg	Leu	Cys	Lys	Arg	Ser	Asp	Val	Leu	Leu	Glu	Pro	Phe
65					70					75				80	

Arg Arg Gly Val Met Glu Lys Leu Gln L u Gly Pro Glu Ile Leu Gln  
 85 90 95  
 Arg Glu Asn Pro Arg Leu Ile Tyr Ala Arg Leu Ser Gly Phe Gly Gln  
 100 105 110  
 Ser Gly Ser Phe Cys Arg Leu Ala Gly His Asp Ile Asn Tyr Leu Ala  
 115 120 125  
 Leu Ser Gly Val Leu Ser Lys Ile Gly Arg Ser Gly Glu Asn Pro Tyr  
 130 135 140  
 Ala Pro Leu Asn Leu Leu Ala Asp Phe Ala Gly Gly Gly Leu Met Cys  
 145 150 155 160  
 Ala Leu Gly Ile Ile Met Ala Leu Phe Asp Arg Thr Arg Thr Asp Lys  
 165 170 175  
 Gly Gln Val Ile Asp Ala Asn Met Val Glu Gly Thr Ala Tyr Leu Ser  
 180 185 190  
 Ser Phe Leu Trp Lys Thr Gln Lys Ser Ser Leu Trp Glu Ala Pro Arg  
 195 200 205  
 Gly Gln Asn Met Leu Asp Gly Gly Ala Pro Phe Tyr Thr Thr Tyr Arg  
 210 215 220  
 Thr Ala Asp Gly Glu Phe Met Ala Val Gly Ala Ile Glu Pro Gln Phe  
 225 230 235 240  
 Tyr Glu Leu Leu Ile Lys Gly Leu Gly Leu Lys Ser Asp Glu Leu Pro  
 245 250 255  
 Asn Gln Met Ser Met Asp Asp Trp Pro Glu Met Lys Lys Lys Phe Ala  
 260 265 270  
 Asp Val Phe Ala Lys Lys Thr Lys Ala Glu Trp Cys Gln Ile Phe Asp  
 275 280 285  
 Gly Thr Asp Ala Cys Val Thr Pro Val Leu Thr Phe Glu Glu Val Val  
 290 295 300  
 His His Asp His Asn Lys Glu Arg Gly Ser Phe Ile Thr Ser Glu Glu  
 305 310 315 320  
 Gln Asp Val Ser Pro Arg Pro Ala Pro Leu Leu Leu Asn Thr Pro Ala  
 325 330 335  
 Ile Pro Ser Phe Lys Arg Asp Pro Phe Ile Gly Glu His Thr Glu Glu  
 340 345 350  
 Ile Leu Glu Glu Phe Gly Phe Ser Arg Glu Glu Ile Tyr Gln Leu Asn  
 355 360 365  
 Ser Asp Lys Ile Ile Glu Ser Asn Lys Val Lys Ala Ser Leu  
 370 375 380

&lt;210&gt; 109

&lt;211&gt; 1524

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 109

ggcaccgagc	tgcgcacagg	cctgagcggg	ggcgggggga	gcctcgccag	cgaggggccc	60
gggcctggcc	atgcctcact	gagccagcgc	ctgcgcctct	acctcgccgc	cagctgggac	120
cagtgccgac	tagtggtctt	cacctgtctt	ctcctggggc	tgggctggcg	gctgaccccg	180
ggtttgtacc	acctggggcg	cactgtcttc	tgcctcgact	tcatggtttt	cacggtgccg	240
ctgcttcaca	tcttcacggg	caacaaacag	ctgggggccc	agatcgctcat	cgtgagcaag	300
atgatgaagg	acgtgttctt	cttcctcttc	ttcctcgggc	tgtggtggtg	agcctatggc	360
gtggccacgg	aggggctcct	gaggccacgg	gacagtgaat	tcccaagtat	cctgcgcgcg	420
gtcttctacc	gtccctacct	gcagatcttc	gggcagattc	cccaggagga	catggacgtg	480
gccctcatgg	agcacagcaa	ctgctcgtcg	gagcccggtc	tctgggcaca	ccctcctggg	540
gcccaggcgg	gcacctgcgt	ctcccagtat	gccaactggc	tgggtggtgct	gctcctcgtc	600
atcttctctg	togtggccaa	catcctgctg	gtcaacttgc	tcattgccat	gttcagttac	660
acattcggca	aagtacaggg	caacagcgat	ctctactgga	aggcgccagc	ttaccgcctc	720
atccgggaat	tccactctcg	gcccgcgctg	gcccgcgcct	ttatcgctcat	ctcccacttg	780
cgcctcctgc	tcaggcaatt	gtgcaggcga	cccgcgagcc	cccagccgtc	ctcccgggac	840
ctcgagcatt	tcggggttta	cctttctcag	gaagccgagc	ggaagctgct	aacgtgggaa	900
toggtgcata	aggagaactt	tctgctggca	cgcgctaggg	acaagcggga	gagcgactcc	960
gagcgtctga	agcgcacgtc	ccaggaagtg	gacttggcac	tgaacacagc	gggacacatc	1020

cgcgagtagc	aacagcgcc	gaaagtgc	gaacgggagg	tccagcagtg	tagccgcgtc	1080
ctggggtagg	tggccgaggg	cctgagccgc	tctgcccgtg	tgccccaggg	tgggcccgcg	1140
ccccctgacc	tgcctgggtc	caaaagactg	gcctctgtgg	cggacttcaa	ggagagagccc	1200
ccacagggga	ttttgctcct	agagtgaagg	tcctctgggc	ctcgccccc	gcacctgggtg	1260
gctttgtcct	tgaagttagc	cccctgcccc	tctggggcac	tgtcaggacc	acctttggga	1320
gtgtcatcct	tacaaaccc	agcatgccc	gctcctccc	gaacccagtc	cagcctggga	1380
ggatcaaggg	ctggatcccc	ggccgttctc	cctctggagg	ctgcagggtc	ctlggggtaa	1440
cagggaacc	agacccctca	ccactcacag	attcctcaca	ctgggggaat	aaagccatlt	1500
cagggggaaa	aaaaaaagaa	aaaa				1524

&lt;210&gt; 110

&lt;211&gt; 3410

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 110

gggaaccagc	ctgcaacgc	tggctccggg	tgacagccgc	gcgcctcggc	caggatctga	60
gtgatgagac	gtgtccccac	tgaggtgccc	cacagcagca	ggtgttgagc	atgggtgag	120
aaagctggacc	ggcaccaaag	ggctggcaga	aatgggcgcc	tgggtgattc	ctaggcagtt	180
ggcggcagca	aggaggagag	gcgcagcctt	ctggagcaga	gcagagacga	agcagttctg	240
gagtgccctga	acggccccct	gagccctacc	cgccctggccc	actatggctc	agagggtgtg	300
ggtgagccgc	ctgctgccc	acgggaaagc	ccagctcttg	ctgggtcaacc	tgtataacct	360
tggccctggag	gtgtgttttg	ccgcaggcat	cacctatgtg	ccgcctctgc	tgttgaagt	420
gggggttagag	gagaagttca	tgaccatggt	gctgggcatt	ggtccagtcg	tgggctggt	480
ctgtgtcccg	ctcctaggct	cagccagtg	ccactggcgt	ggaagctatg	gcgcgcgcgc	540
gcccttcctc	tgggcactgt	ccttgggcct	cctgtcagac	ctctttctca	tcccaagggc	600
cggttggtga	gcagggtgc	tgtgcccggg	lccccggccc	ctggagctgg	cactgclcat	660
cctgggcgtg	gggttgctgg	acttclglgg	ccaggtgtgc	lccactccac	tggagacct	720
gctctctgac	ctcttccggg	acccggagca	ctgtcgccag	gcctaccltg	tctatgacct	780
tgccttggtc	ccttggggct	gcctgggcta	cctcctgcct	gccattgact	gggacaccag	840
cttccctcac	tgcttagcag	ccacaactgt	ggagtgccct	tttggcctgc	tcacctcat	900
cgagccagca	gaagggtctg	ccggccccct	cttgtgcgcc	gaggcagcgc	tgggcccac	960
ccgcttggtc	ttccgggaac	tggggccccc	gcttccccgg	cactgctgtc	catgcggggc	1020
catgccccgc	acccctggcc	ggctcttctg	ggctgagctg	ctgcaccagc	tgtgtgccc	1080
gaccttccag	ctgttttaca	cggatttctg	gggcaggggg	tgacagctga	tggcaactcat	1140
agctgagccg	ggcaccgagg	ccggagagca	ctatgttgaa	ctgtaccagg	gcgtgcccag	1200
ggggtgtgtc	ctgcagtgcc	ccatctccct	ggtctctctc	ggcgttcgga	tggcagacct	1260
gcagcgatcc	ggcactugag	cagctctatc	ggccagtytg	ctggtcatgg	acgggctggt	1320
cggtgcacaa	tgcctgtccc	acagtgaggg	cggtgtgacc	gcagcttccc	ctgtggtctc	1380
gttccacctc	tcagccctgc	agatcctgcc	clacacactg	gcttccclct	ccctccccc	1440
gaagcaggtg	ttcctgccc	aataccgagg	ggacactgga	gggtgctagc	gtgagacag	1500
cctgatgacc	agcttctctg	caggccctaa	gcctggagct	cccttcccta	atggacacgt	1560
gggtgctgga	ggcagtgccc	tgtctccacc	tccacccgcg	ctctgcgggg	cctctgacct	1620
lgatgtctcc	gtacgtgtgg	tgggtgggtg	gccacccgag	gcaggggtgg	ttccgggccc	1680
gggcactctg	ctggacctcg	ccatcctgga	tagtgccctc	ctgctgtccc	aggtggcccc	1740
atccctgttt	atgggtccc	ttgtccagct	cagccagttc	gtcactgcct	atatggtgtc	1800
tgcgcagggc	ctgggtctgg	tgcacattta	cctttgtaca	caggtagtat	ttgacaagag	1860
cgacttgccc	aaatactcag	cgtagaaaac	ttccagcaca	ttggggtgga	ggcctgacct	1920
cactgggtcc	cagctccccg	ctcctgttag	ccccatgggg	ctgcccggct	ggccgcagct	1980
ttctgttctc	gcacaaagta	tgtgtctctc	tgtgtcccac	ctgtgctgct	gaggtgcgtg	2040
gctgcacagc	tgggggctgg	ggcgtccctc	tctctctccc	ccagctctca	gggtgacctg	2100
actggaggcc	ttccaaaggg	gtttcagctc	ggacttatac	agggaggcca	gaagggtccc	2160
atgcactgga	atgcggggac	tctgcaggtg	gattacccag	gctcaggggt	aacagctagc	2220
ctcctagtgt	agacacacct	agagaagggt	ttttgggagc	tgaataaact	cagtcacctg	2280
gtttcccatc	tctaagcccc	ttaacctgca	gcttctgtta	atgtagctct	tgcattggag	2340
ttctataggat	gaacacactc	tccatgggat	ltgaacatat	gacttalitt	taggggaaga	2400
gtcctgaggg	gcacccacac	agaaacaggt	ccctcagccc	cacagccctg	tctttttgct	2460
gatccacccc	cctcllactc	lttatcagga	lgtggcctgt	lgttccclct	gttgccatca	2520
cagagacaca	gcacatttga	tcttcaactc	atttatllaa	caaagtagaa	gggaatccat	2580
tgtatagctt	tctgtgtlgt	tgtctaatat	tlgggtaggg	tgggggagtc	ccaaacacaa	2640
ggtccccctg	gatagctggt	cattgggctg	atcattgcca	gaatcttctt	ctcctggggt	2700

ctggccccc	aaaatgccta	accaggauc	ttggaaatto	tactcatccc	aaatgataat	2820
tccaaatgct	gttacccaag	gttaggggtg	tgaaggaaag	tagagggtgg	ggcttcaggt	2880
ctcaacggct	tccctaacca	ccccctctct	cttggcccag	cctggttccc	cccacttcca	2940
ctccccctta	ctctctctag	gactgggctg	atgaaggcac	tgccccaaat	ttccccctacc	3000
ccccactttc	ccctaccccc	aactttcccc	accagctcca	caaccctggt	tggagctact	3060
gcaggaccag	aagcacaaaag	tgcgggttcc	caagcctttg	tccatctcag	ccccagaggt	3120
atatctgtgc	ttgggggaatc	tcacacagaa	actcaggagc	acccctctgc	tgagctaagg	3180
gaggctttat	ctctcagggg	gggttttaag	gccgtttgca	ataatgacgt	cttattttact	3240
tagcgggggtg	aattattttat	actgttaagtg	agcaatcaga	gtataatggt	tatggtgaca	3300
aaattaaaag	ctttctttata	tgttttaaaaa	aaaaaaataaa	aaaaaaataaa	aaaaaaataaa	3360
aaaaaaataa	aaaaaaataaa	aaaaaaataaa	aaaaaaataaa	aaaaaaataaa	aaaaaaataaa	3410

<210> 111  
 <211> 1289  
 <212> DNA  
 <213> Homo sapien

<400> 111						
agccaggcgt	ccctctgect	gccactcag	tggcaacacc	cgaggagctgt	tttgtccttt	60
gtggagcctc	agcagttccc	tctttcagaa	ctcactgcca	agagccctga	acaggagacca	120
ccatgcagtg	cttcagcttc	attaagacca	tgatgatcct	cttcattttg	ctcatctcttc	180
tgtgtggtgc	agccctgttg	gcagtgggca	tctgggtgtc	aatcgatggg	gcatacttttc	240
tgaagatctt	cgggccactg	togtccagtg	ccatgcagtt	tgtcaacgtg	ggclacclcc	300
tcategcago	cggcgtttgt	gtctttgtct	ttggtttcct	gggclgctct	ggkqctaaqa	360
ctgagagcaa	gtgtgcccct	gtgacgttct	tuttcactcc	ctccclcatc	ttcattgctg	420
aggttgagc	tgtgtgtgtc	gccttgggtg	acaccacact	ggctgagcac	ttcctgacgt	480
tgtgtgtagt	gcctgccatc	aagaaagatt	atggttcccc	ggaagacttc	actcaagtgt	540
ggaacaccac	catgaauygg	ctcaagtgtc	gtggcttcac	caactatacg	gattttgagg	600
actcacccta	cttcaaaagag	aacagtgcct	ttccccctatt	ctgttgcaat	gacaacgtca	660
ccacacagc	aaatgaatac	tgcaccaaag	aaaaggctca	cgaccacaaa	gtagagggtt	720
gcttcaatca	gtttttgtat	gacatccgaa	ctaagtgcagt	cacogtgggt	ggtgtggcag	780
ctggaatttg	gggcctcgag	ctggctgcca	tgatttgttc	catgtatctg	tactgcaatc	840
tacaataagt	ccacttctgc	ctctgccact	actgtctgca	catgggaact	gtgaagaggg	900
acccctggcaa	gcagcagtg	ttgggggagg	ggacaggatc	taacantgtc	acttgggcca	960
gaatggacct	gcccctttctg	ctccagactt	gggctatgat	agggaccact	cccttttagcg	1020
atgectgact	ttccttccat	tgggtgggtg	atgggtgggg	ggcatlccag	agccctctagg	1080
gtagccagtt	ctgttgccca	ttccccaggt	ctattaaacc	cttgatctgc	ccccagggcc	1140
tagtgggtgat	cccagtgctc	tactggggga	tgaagagaaq	gcattttata	gacctgggcat	1200
aagtgaatc	agcagagcct	ctgggtgggt	gtgtagaagg	cacttcaaaa	tgcataaacc	1260
tgttacaatg	ttaaaaaaaa	aaaaaaataaa				1289

<210> 112  
 <211> 315  
 <212> PRT  
 <213> Homo sapien

<400> 112	
Met Val Phe Thr Val Arg Leu Leu His Ile Phe Thr Val Asn Lys Gln	
1 5 10 15	
Leu Gly Pro Lys Ile Val Ile Val Ser Lys Met Met Lys Asp Val Phe	
20 25 30	
Phe Phe Leu Phe Phe Leu Gly Val Trp Leu Val Ala Tyr Gly Val Ala	
35 40 45	
Thr Glu Gly Leu Leu Arg Pro Arg Asp Ser Asp Phe Pro Ser Ile Leu	
50 55 60	
Arg Arg Val Ph Tyr Arg Pro Tyr Leu Gln Ile Phe Gly Gln Ile Pro	
65 70 75 80	
Gln Glu Asp Met Asp Val Ala Leu Met Glu His Ser Asn Cys Ser Ser	
85 90 95	
Glu Pro Gly Phe Trp Ala His Pro Pro Gly Ala Gln Ala Gly Thr Cys	
100 105 110	
Val Ser Gln Tyr Ala Asn Trp Leu Val Val Leu Leu Val Ile Phe	

		115				120				125					
L u	Leu	Val	Ala	Asn	Ile	Leu	Lcu	Val	Asn	Leu	Leu	Ile	Ala	Met	Phe
	130					135					140				
Ser	Tyr	Thr	Phe	Gly	Lys	Val	Gln	Gly	Asn	Ser	Asp	Leu	Tyr	Trp	Lys
145				150					155						160
Ala	Gln	Arg	Tyr	Arg	Leu	Ile	Arg	Glu	Phe	His	Ser	Arg	Pro	Ala	Leu
				165					170						
Ala	Pro	Pro	Phe	Ile	Val	Ile	Ser	His	Leu	Arg	Leu	Leu	Leu	Arg	Gln
			180					185					190		
Leu	Cys	Arg	Arg	Pro	Arg	Ser	Pro	Gln	Pro	Ser	Ser	Pro	Ala	Leu	Glu
	195					200						205			
His	Phe	Arg	Val	Tyr	Leu	Ser	Lys	Glu	Ala	Glu	Arg	Lys	Leu	Leu	Thr
	210					215						220			
Trp	Glu	Ser	Val	Hie	Lys	Glu	Asn	Phe	Leu	Leu	Ala	Arg	Ala	Arg	Asp
225					230						235				240
Lye	Arg	Glu	Ser	Asp	Ser	Glu	Arg	Leu	Lys	Arg	Thr	Ser	Gln	Lys	Val
				245					250					255	
Asp	Leu	Ala	Leu	Lys	Gln	Leu	Gly	His	Ile	Arg	Glu	Tyr	Glu	Gln	Arg
			260					265						270	
Leu	Lys	Val	Leu	Glu	Arg	Glu	Val	Gln	Gln	Cys	Ser	Arg	Val	Leu	Gly
			275				280					285			
Trp	Val	Ala	Glu	Ala	Leu	Ser	Arg	Ser	Ala	Leu	Leu	Pro	Pro	Gly	Gly
	290					295					300				
Pro	Pro	Pro	Pro	Asp	Leu	Pro	Cly	Ser	Lys	Asp					
305					310					315					

```
<210> 113
<211> 553
<212> PRT
<213> Homo sapien
```

<400> 113																	
Met	Val	Gln	Arg	Leu	Trp	Val	Ser	Arg	Leu	Leu	Arg	His	Arg	Lys	Ala		
1				5					10					15			
Gln	Leu	Leu	Leu	Val	Asn	Leu	Leu	Thr	Phe	Gly	Leu	Glu	Val	Cys	Leu		
				20				25					30				
Ala	Ala	Gly	Ile	Thr	Tyr	Val	Pro	Pro	Leu	Leu	Leu	Glu	Val	Gly	Val		
		35					40					45					
Glu	Glu	Lys	Phe	Met	Thr	Met	Val	Leu	Gly	Ile	Gly	Pro	Val	Leu	Gly		
		50				55					60						
Leu	Val	Cys	Val	Pro	Leu	Leu	Gly	Ser	Ala	Ser	Asp	His	Trp	Arg	Gly		
65					70					75					80		
Arg	Tyr	Gly	Arg	Arg	Arg	Pro	Phe	Ile	Trp	Ala	Leu	Ser	Leu	Gly	Ile		
				85					90					95			
Leu	Leu	Ser	Leu	Phe	Leu	Ile	Pro	Arg	Ala	Gly	Trp	Leu	Ala	Gly	Leu		
				100				105					110				
Leu	Cys	Pro	Asp	Pro	Arg	Pro	Leu	Glu	Leu	Ala	Leu	Leu	Ile	Leu	Gly		
		115					120					125					
Val	Gly	Leu	Leu	Asp	Phe	Cys	Gly	Gln	Val	Cys	Phe	Thr	Pro	Leu	Glu		
		130				135					140						
Ala	Leu	Leu	Ser	Asp	Leu	Phe	Arg	Asp	Pro	Asp	His	Cys	Arg	Gln	Ala		
145					150					155					160		
Tyr	Ser	Val	Tyr	Ala	Phe	Met	Ile	Ser	Leu	Gly	Gly	Cys	Leu	Gly	Tyr		
				165					170					175			
Leu	Leu	Pro	Ala	Ile	Asp	Trp	Asp	Thr	Ser	Ala	Leu	Ala	Pro	Tyr	Leu		
			180				185						190				
Gly	Thr	Gln	Glu	Glu	Cys	Leu	Phe	Gly	Leu	Leu	Thr	Leu	Ile	Phe	Leu		
		195					200					205					
Thr	Cys	Val	Ala	Ala	Thr	Leu	Leu	Val	Ala	Glu	Glu	Ala	Ala	Leu	Gly		
		210				215					220						
Pro	Thr	Glu	Pro	Ala	Glu	Gly	Leu	Ser	Ala	Pro	Ser	Leu	Ser	Pro	His		
225				230						235					240		

Cys Cys Pro Cys Arg Ala Arg Leu Ala Phe Arg Asn Leu Gly Ala L u  
 245 250 255  
 Leu Pro Arg Leu His Gln Leu Cys Cys Arg Met Pro Arg Thr Leu Arg  
 260 265 270  
 Arg Leu Phe Val Ala Glu Leu Cys Ser Trp Met Ala Leu Met Thr Phe  
 275 280 285  
 Thr Leu Phe Tyr Thr Asp Phe Val Gly Glu Gly Leu Tyr Gln Gly Val  
 290 295 300  
 Pro Arg Ala Glu Pro Gly Thr Glu Ala Arg Arg His Tyr Asp Glu Gly  
 305 310 315 320  
 Val Arg Met Gly Ser Leu Gly Leu Phe Leu Gln Cys Ala Ile Ser Leu  
 325 330 335  
 Val Phe Ser Leu Val Met Asp Arg Leu Val Gln Arg Phe Gly Thr Arg  
 340 345 350  
 Ala Val Tyr Leu Ala Ser Val Ala Ala Phe Pro Val Ala Ala Gly Ala  
 355 360 365  
 Thr Cys Leu Ser His Ser Val Ala Val Val Thr Ala Ser Ala Ala Leu  
 370 375 380  
 Thr Gly Phe Thr Phe Ser Ala Leu Gln Ile Leu Pro Tyr Thr Leu Ala  
 385 390 395 400  
 Ser Leu Tyr His Arg Glu Lys Gln Val Phe Leu Pro Lys Tyr Arg Gly  
 405 410 415  
 Asp Thr Gly Gly Ala Ser Ser Glu Asp Ser Leu Met Thr Ser Phe Leu  
 420 425 430  
 Pro Gly Pro Lys Pro Gly Ala Pro Phe Pro Asn Gly His Val Gly Ala  
 435 440 445  
 Gly Gly Ser Gly Leu Leu Pro Pro Pro Pro Ala Leu Cys Gly Ala Ser  
 450 455 460  
 Ala Cys Asp Val Ser Val Arg Val Val Val Gly Glu Pro Thr Glu Ala  
 465 470 475 480  
 Arg Val Val Pro Gly Arg Gly Ile Cys Leu Asp Leu Ala Ile Leu Asp  
 485 490 495  
 Ser Ala Phe Leu Leu Ser Gln Val Ala Pro Ser Leu Phe Met Gly Ser  
 500 505 510  
 Ile Val Gln Leu Ser Gln Ser Val Thr Ala Tyr Met Val Ser Ala Ala  
 515 520 525  
 Gly Leu Gly Leu Val Ala Ile Tyr Phe Ala Thr Gln Val Val Phe Asp  
 530 535 540  
 Lys Ser Asp Leu Ala Lys Tyr Ser Ala  
 545 550

&lt;210&gt; 114

&lt;211&gt; 241

&lt;212&gt; PRT

&lt;213&gt; Homo sapien

&lt;400&gt; 114

Met Gln Cys Phe Ser Phe Ile Lys Thr Met Met Ile Leu Phe Asn Leu  
 1 5 10 15  
 Leu Ile Phe Leu Cys Gly Ala Ala Leu Leu Ala Val Gly Ile Trp Val  
 20 25 30  
 Ser Ile Asp Gly Ala Ser Phe Leu Lys Ile Phe Gly Pro Leu Ser Ser  
 35 40 45  
 Ser Ala Met Gln Phe Val Asn Val Gly Tyr Phe Leu Ile Ala Ala Gly  
 50 55 60  
 Val Val Val Phe Ala Leu Gly Phe L u Gly Cys Tyr Gly Ala Lys Thr  
 65 70 75 80  
 Glu Ser Lys Cys Ala Leu Val Thr Phe Phe Ile Leu Leu Leu Ile  
 85 90 95  
 Phe Ile Ala Glu Val Ala Ala Ala Val Val Ala Leu Val Tyr Thr Thr  
 100 105 110  
 Met Ala Glu His Phe Leu Thr Leu Leu Val Val Pro Ala Ile Lys Lys

115	120	125
Asp Tyr Gly Ser Gln Glu Asp Phe Thr Gln Val Trp Asn Thr Thr Met		
130	135	140
Lys Gly Leu Lys Cys Cys Gly Phe Thr Asn Tyr Thr Asp Phe Glu Asp		
145	150	155
Ser Pro Tyr Phe Lys Glu Asn Ser Ala Phe Pro Pro Phe Cys Cys Asn		
165	170	175
Asp Asn Val Thr Asn Thr Ala Asn Gly Thr Cys Thr Lys Gln Lys Ala		
180	185	190
His Asp Gln Lys Val Glu Gly Cys Phe Asn Gln Leu Leu Tyr Asp Ile		
195	200	205
Arg Thr Asn Ala Val Thr Val Gly Gly Val Ala Ala Gly Ile Gly Gly		
210	215	220
Leu Glu Leu Ala Ala Met Ile Val Ser Met Tyr Leu Tyr Cys Asn Leu		
225	230	235
Gln		240

<210> 115  
 <211> 366  
 <212> DNA  
 <213> Homo sapien

<400> 115  
 gctttttctc tccctctctc tgaatttaac tctttcaact tgcattttgc aaggattaca 60  
 cttttcaactg tgaatgtatat tgtgttgcaa aaaaaaaaaa gtgtctttgt ttaaaattac 120  
 ttggtttgtg aatccatctt gctttttccc cattgggaact agtcattaac ccctctctga 180  
 actggtagaa aaacatctga agagctagtc tctcagcctc tgacaggtga attggatggt 240  
 tctcagaacc atttcaccca gacagcctgt ttctatctctg ttttaataaat tagtttgggt 300  
 tctctacatg cataacaaac cctgtctcca tctgtcacct aaaaagtctgt gacllgaaqt 360  
 ttagtc 366

<210> 116  
 <211> 282  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature  
 <222> (1)...(282)  
 <223> n = A,T,C or G

<400> 116  
 acaaagatga accatttccct atattatagc aaaattaaaa tctaccctga ttctaatatt 60  
 gagaatgag atnaascaca atnttataaa gtctacttag agaagatcaa gtgacctcaa 120  
 agactttact attttcatat ttttaagacac atgatttatc ctattttagt aacctgggtc 180  
 atacgtttaa caaaggataa tgtgaacagc agagaggatt tgttggcaga aattctatgt 240  
 tcaatctngs acletctane tcacagacat ttctattcct tt 282

<210> 117  
 <211> 305  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature  
 <222> (1)...(305)  
 <223> n = A,T,C or G

<400> 117  
 acacatgtcg cttcactgcc ttcttagatg cttctgggtca acatanagga acagggacca 60  
 tatttatcct cctcctgaa acaattgcaa aataanacaa aatatatgaa acaattgcaa 120

aataaggcaa aatatatgaa acaacaggto tggagatatt ggaatcagt caatgaagga 180  
 tactgatccc tgatcactgt cctaatgcag gatgtgggaa acagatgagg tcacctctgt 240  
 gactgcccc gcttactgcc tgtagagagt tictangetg cagttcagac agggagaaat 300  
 tgggt 305

<210> 118

<211> 71

<212> DNA

<213> Homo sapien

<220>

<221> misc\_feature

<222> (1)...(71)

<223> n = A,T,C or G

<400> 118

accaagggtgt ntgaatctct gacgtgggga tctctgattc ccgcacaatc tgagtggaaa 60  
 santcctggg t 71

<210> 119

<211> 212

<212> DNA

<213> Homo sapien

<220>

<221> misc\_feature

<222> (1)...(212)

<223> n = A,T,C or G

<400> 119

actccgglltg gtgtcagcag cactgtggcat tgaacatngc aatgtggagc ccaaacccaca 60  
 gaaaatgggg tgaaattggc caactttcta tnaacttatg ttggcaantt tgcacccaac 120  
 agtaagctgg cctttctaataaaaagaaaat tgaaaggttt ctoactaanc ggaattaant 180  
 aatggantca aganactccc aggcctcagc gt 212

<210> 120

<211> 90

<212> DNA

<213> Homo sapien

<220>

<221> misc\_feature

<222> (1)...(90)

<223> n = A,T,C or G

<400> 120

actcgttgca natcaggggc cccccagagt caccgttgca ggagtccttc tggctcttgcc 60  
 ctccgcgggc gcagaacatg ctgggggtgg 90

<210> 121

<211> 218

<212> DNA

<213> Homo sapien

<220>

<221> misc\_feature

<222> (1)...(218)

<223> n = A,T,C or G

<400> 121

tgtanctga anacgacaga nagggttctc aaaaatggag aanccttqua gtcatttlqa 60  
 gaataagatt tgctaaagga ttggggcta aaacatgggt attggagac atttctgag 120



atatncangt aaattangga atgaattcat ggttcttttg ggaattcctt tccgatngcc 100  
agcatanact tcatgtgggg atanceagctc cctttgta 210

<210> 122  
<211> 171  
<212> DNA  
<213> Homo sapien

<400> 122  
tggggglqta tgcacactga aggcacaaaa ttgagactca actggcttaa ccaataaagg 60  
catttggttag ctcatggac aggaagtccg atggtggggc atcttcagtg ctgcatgagt 120  
caccaccccg gcgggggtcat ctgtgccaca ggtccctgtt gacagtgcgg t 171

<210> 123  
<211> 76  
<212> DNA  
<213> Homo sapien

<220>  
<221> misc\_feature  
<222> (1)...(76)  
<223> n - A, T, C or G

<400> 123  
tgtagcgtga agacnacaga atggtgtgtg ctglactate caggacaca tttatlatca 60  
ttatcaanta ttgtgt 76

<210> 124  
<211> 131  
<212> DNA  
<213> Homo sapien

<400> 124  
acctttccc agggccaatg tccgtgtgtg taactggccg gctgcaggac agctgcaatt 60  
caatgtctg ggtcatatgg agggggaggag actctaaat agccaatttt attctcttgg 120  
ttaagatttg t 131

<210> 125  
<211> 432  
<212> DNA  
<213> Homo sapien

<400> 125  
accltalcta ctggctatga aatagatggg ggaaaattgc gttaccaact ataccactgg 60  
cttgaaaaag aggtgatagc tcttcagagg acttgtgact tttgtcaga tgcgaagaa 120  
ctacagtctg catttggcag aaatgaagat gaatttggat taaatgagga tgcgaagat 180  
ttgcttcacc aaacaaaagt gaaacaactg agagaaaatt ttcaggaaaa aagacagtgg 240  
ctcttgaaat atcagtcact tttgagaatg tttcttagtt actgcatact tcatggatcc 300  
catggtgggg gtcttcgcat tgaagaatg gaattgattt tgccttttga agaattctcg 360  
caggaaacat cagaaccact attttctagc cctctgtcag agcaaacctc agtgcctctc 420  
ctctttgctt gt 432

<210> 126  
<211> 112  
<212> DNA  
<213> Homo sapien

<400> 126  
acacaacttg aatagtaaaa tagaaclga gctgaattt claatcact llttaacct 60  
agtaagaatg atatttccc ccagggtcc ccaatattt aaaaaattt gt 112

<210> 127

<211> 54  
 <212> DNA  
 <213> Homo sapien

<400> 127  
 accacgaaac cacaaacaaag atggaagcat caatccactt gccaaagcaca gcag 54

<210> 128  
 <211> 323  
 <212> DNA  
 <213> Homo sapien

<400> 128  
 acctcattag taattgtttt gttgtttcat ttttttctaa tgtctccctt ctaccagctc 60  
 acctgagata acagaatgaa aatggaagga cagccagatt tctcctttgc tctctgtcga 120  
 ttctctctga agtctagggt acccattttg gggacccatt ataggcaata aacacagttc 180  
 ccaaagcatt tggacagttt cttgtttgtt tttagaatgg ttttcctttt tottagcctt 240  
 ttctctgaaa aggtcactc agtcccttgc ttgtcagtgc gactgggctc cccagggcct 300  
 aggtgcctt cttttccatg tcc 323

<210> 129  
 <211> 192  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(192)  
 <223> n = A,T,C or G

<400> 129  
 acatacatgt gtgtatattt ttaatatatca cttttgtatc actctgactt tttagcatatc 60  
 tgaanaacaca ctaacataat ttntgtgaac catgatcaga tacaacccaa atcatttcatc 120  
 tagcacattc atctgtgata naaagatagg tgagtttcat ttctctcacy ttggccaatg 180  
 gataaacaaa gt 192

<210> 130  
 <211> 362  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(362)  
 <223> n = A,T,C or G

<400> 130  
 ccccttttta tggaaatgagt agactgtatg tttgaanatt tanccacaac ctctttgaca 60  
 tataatgacg caacanaaag gtgtgtgitta gtccataggt tcagtttatg cccctgacaa 120  
 gtttccattg tgttttgccg atcttctgac taatcgttgt atctccatg ttattagtaa 180  
 ttctgtatc cattttgta acgcctggta gatataacct gctangagga taactttata 240  
 cttattttaa agctcttatt ttgtggtcat taagtggca atttatgtgc agcattttat 300  
 tgcagcagga agccgtgtg ggttgggtgt aaggtctttt gclaatctta aaagtaatg 360  
 99 362

<210> 131  
 <211> 332  
 <212> DNA  
 <213> Homo sapi n

<220>  
 <221> misc\_f ature

&lt;222&gt; {1}...{332}

&lt;223&gt; n = A, T, C or G

&lt;400&gt; 131

ctttttgaaa gatcgtgtcc actcctgtgg acatcttgtt ttaatggagt ttcccatgca	60
gtangactgg tatggttgca gctgtccaga taasaacatt tgaagagctc caaaatgaga	120
gttctcccag gttegccttg ctgctccaag tctcagcage agcctctttt aggaggcatc	180
ttctgaacta gattaaggca gcttgtaaat ctgatgtgat ttggtttatt atccaaactaa	240
cttccatctg ttatcactgg agaaagccca gactccccan gaonggtacg gatttgtgggc	300
atanaaggat tgggtgaagc tggcgttgtg gt	332

&lt;210&gt; 132

&lt;211&gt; 322

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; {1}...{322}

&lt;223&gt; n = A, T, C or G

&lt;400&gt; 132

actttttgcca ttttgtlat ataaacacac ttggggacatt ctcttgaaaa ctaggtgtcc	60
agtggctaaq agaaactcat ttcaagcaat tctgaagaga aaaccagcat gacacagaat	120
ctcaacttcc caaacggggg ctctgtggga aaatgaagg aggaccttg tatctcgggt	180
ttlagcaagt taatatgaan atgacaggaa aggtttatit atcaacaaag agaagagttg	240
ggatgcttct aaaaaaact ttggtagaga aaataggaat gctnaatcct agggagacct	300
gtaacaatct acaattgggc ca	322

&lt;210&gt; 133

&lt;211&gt; 278

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; {1}...{278}

&lt;223&gt; n = A, T, C or G

&lt;400&gt; 133

acaagccttc acaagttaa ctaaattggg attaatcttt ctgtanttat ctgcataatt	60
cttggttttt ttccatctg gctcctgggt tgacaatttg tggaaacaa cttattgcta	120
ctatttaaaa aaatcacaa atctttccct ttaagctatg ttnaattcaa actattcctg	180
ctattcctgt ttgtcgaag aaatttatatt tttaaaaata tgtntatttg tttgatgggt	240
cccacgaaac actaataaaa accacagaga ccagcctg	278

&lt;210&gt; 134

&lt;211&gt; 121

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; {1}...{121}

&lt;223&gt; n = A, T, C or G

&lt;400&gt; 134

gtttanaaaa ctgttttagc tccatagagg aaagaatgtt aaactttgta ttttaaaaca	60
tgattctctg aggttaaaact tggttttcaa atgttatit taccgtgatt ttgcttttgg	120
c	121

&lt;210&gt; 135

<211> 350  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(350)  
 <223> n - A,T,C or G

<400> 135  
 acttanaacc atgcctagca catcagaatc cctcaasagaa catcagtata atcctataacc 60  
 atancaagtg gtgactgggt aagcgtgcga caaagggtcag ctggcacatt acttgtgtgc 120  
 aaacttgata cttttgttct aagttagaac tagtatacag tnoctaggan tggtaactcca 180  
 ggggtgcccc caactcctgc agccgtcct ctgtgccagn cctgnaagg aactttcgt 240  
 ccacctcaat caagccctgg gccatgctac ctgcaattgg ctgaacaaac gtttgcgtgag 300  
 ttcccaaggga tgcaagcct ggtgctcaac tctggggcg tcaactcagt 350

<210> 136  
 <211> 399  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(399)  
 <223> n - A,T,C or G

<400> 136  
 tgtacogtga agacgacaga agttgcatgg caggggacagg gcaggggcoga ggccagggtt 60  
 gctgtgattg tatccgaata ntccctcgtga gaaaagataa tgagatgacg tgaacagcct 120  
 gcagacttgt gtctgccttc aanaagccag acagggaagg cctgacctgc ttgggtctga 180  
 cctggcgggc agccagccag ccacagggtgg gcttcttcc tttgtggtga cccncccaag 240  
 aaaaactgcag agggccaggg tcaggtgtna gtgggtangt gaccalaaa caccaggtgc 300  
 tcccaggaaac ccggggcaaaq gccatccca cctacagcca gcctgcccac tggcgtgatg 360  
 ggtgcagang galcaagcag ccagntgttc tgcLgtgg 399

<210> 137  
 <211> 165  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(165)  
 <223> n - A,T,C or G

<400> 137  
 actggtgtgg tngggggtga tgctggtggt anaagttgan gtgaactcan gakggtgtgt 60  
 ggaggaagtg tgtgaacgta gggatqtaga ngkttggcc gtgcLAAAtg agcttcggga 120  
 ttggctggtc ccactgqctg tcactgtcat tggtagggLt cctgt 165

<210> 138  
 <211> 338  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(338)  
 <223> n - A,T,C or G

<400> 138

```

actcactgga atgccacatt cacaacagaa tcagaggtct gtgaaacat taatggctcc      60
ttaacttcct cagtaagaat cagggaacttg aatgggaac gtaacagcc acatgcccac      120
tgctgggcag totcccatgc ctccacagat gaaagggtt gagaaatc acatccaaag      180
tcattgtttt ccagccacac caaaagggtgc ttgggggtga gggctggggg catananggt      240
cangcctcag gaagcctcaa gtccattca gctttgcac tgaattcc ccatnttas      300
aaaaactgat gccttttttt tttttttttg taaaallc
338

```

<210> 139  
 <211> 382  
 <212> DNA  
 <213> Homo sapien

```

<400> 139
gggaattottg gtttttggca tctgggttgc ctatagccga ggcactttg acagaacaaa      60
gaaagggaact tcaggtlaaga aggtgattta cagccagcct agtgcacga gtgaaggaga      120
attcaaacag acctcgtcat tcttgggttg agcctggctg gtcacccgc tatcatctgc      180
atttgacctta ctacagglgt accggactct ggcacctgat gtctgtagtt tcacaggatg      240
ccttattlgt cttctacacc ccacagggcc ccctacttct tggatgtgt ttttaataat      300
gtcagctatg tgcacctac tcttccatgc cctccctccc ttccctacca ctgctgagtg      360
gcctgggaact tgttttaagt gt
382

```

<210> 140  
 <211> 200  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature  
 <222> (1)...[200]  
 <223> n = A,T,C or G

```

<400> 140
accgaanctt ctttctgttg tgttngattt tactataggg gtttngcttn ttctaaanat      60
acttttcatt taacancttt tgtaagtgat cagggtgcac ttigtccat anaattattg      120
ttttcacatt tcaacttga tgtgtttgtc tottanagca ttggtgaaat cacatatitt      180
atattcagca taaaggagaa
200

```

<210> 141  
 <211> 335  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature  
 <222> {1}...{335}  
 <223> n = A,T,C or G

```

<400> 141
actllatttt cgaacactc atatgttgca aaaaacacat agaaaaataa agtttggttg      60
gggtgctgac taaacttcaa gtcacagact tttatgtgac agattggagc aggytttgtt      120
atgcatgtag agaaccctaa ctactttatt aaacaggata gaaacaggct gtctgggtga      180
aatgggttctg agaaccatcc aattcacctg tcagatgctg atanactago tcttcagatg      240
ttttctacc agtttaastg actanttcca atgggggaaa agcaagatgg      300
attcacaac caagtaattt taaacaaaga cactt
335

```

<210> 142  
 <211> 459  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature

&lt;222&gt; {1}...{459}

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 142

accagggttaa	tattgccaca	tatatccttt	ccaattgcgg	gctaaacaga	cgtgtattta	60
gggttggtta	aagacaaccc	agcttaatat	caagagaaat	tgtgaccttt	catggagtat	120
ctgatggaga	aaacactgag	tittgacaaa	tottatttta	ttcagatagc	agtctgatca	180
cacatgggtcc	aacaacactc	aaataataaa	tcaaataina	tcagatgtta	aagattgggtc	240
ttcaaacatc	atagccaatg	atgccccgct	tgcctataat	ctctccgaca	taaaaccaca	300
tcaacacctc	agtggccaac	aaaccattca	gcacagcttc	cttaactgtg	agctgtttga	360
agctaccagt	ctgagcacta	ttgactatnt	tittcangct	ctgaatagct	ctagggatct	420
cagcangggg	gggaggaaac	agctcaacct	tggegtant			459

&lt;210&gt; 143

&lt;211&gt; 140

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 143

acatttcctt	ccaccaagtc	aggactcctg	gcttctgtgg	gagttcttat	cacctgaggg	60
aaatccaaa	agtctctct	agaaaggaat	agtgtcacca	acccacacca	tctccctgag	120
acctccgac	tctccctgtg					140

&lt;210&gt; 144

&lt;211&gt; 164

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc feature

&lt;222&gt; {1}...{164}

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 144

acttcagtaa	caacatacaa	taacaacatt	aagtgtatat	tgccatcttt	gtcattttct	60
ctctatacaa	ctctcccttc	tgaascaan	aatcactanc	caatcactta	tacaaatttg	120
aggaatttaa	tccatatttg	tittcaataa	ggaaaaaag	atgt		164

&lt;210&gt; 145

&lt;211&gt; 303

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc feature

&lt;222&gt; {1}...{303}

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 145

agctagacca	tcaaactttg	tatttgtaet	ggcaaacctc	cagnagaaat	tccataaacaa	60
actggagggt	atttataccc	aattatccca	ttcattaaca	tgcctctctc	ctcaggctat	120
gcaggacago	tctcataaqt	cggcccagge	atccagatac	taccatttgt	ataaectica	180
gtaggggagt	ccatccaaqt	gacagggtct	atcaaaaggag	gaatgggaac	ataagcccag	240
tagtaaaatn	tlgcttagct	gaaacagcca	caaaagactt	accgccgtgg	tgattaccat	300
caa						303

&lt;210&gt; 146

&lt;211&gt; 327

&lt;212&gt; DNA

&lt;213&gt; Homo sapi n

&lt;220&gt;

<221> misc\_feature  
 <222> (1)...(327)  
 <223> n = A,T,C or G

<400> 146  
 actgcagctc aattagaagt ggtctctgac ttctcatcanc ttctccctgg gctccatgac 60  
 actggcctgg agtgactcat tgcctctggt ggttgagaga gctcccttgc caacaggcct 120  
 ccaagtcagg gctgggattt gtctcttctt cacattotag caacaatatg ctggccactt 180  
 cctgaacagg gagggctgga ggagccagca tggacaacagc tggccactttc taaagttagc 240  
 agacttgccc ctgggcctgt cacacctact gatgaccttc tgtgcctgca ggatggaatg 300  
 taggggtgag ctgtgtgact ctatggt 327

<210> 147  
 <211> 173  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(173)  
 <223> n = A,T,C or G

<400> 147  
 acattgtttt tttagagataa agcattgana gagctctcct taacgtgaca caatggaagg 60  
 actggaacac ataccacat ctttgtcttg agggataatt ttctgataaa gtcttgctgt 120  
 atattcaagc acatatgtta tatattatto agttccatgt ttatagccta gtt 173

<210> 148  
 <211> 477  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(477)  
 <223> n = A,T,C or G

<400> 148  
 acaaccactt tatctcatcg aatttttaac ccaaactcac tcaactgtgc tttotatcct 60  
 atgggatata ttatttgatg ctccatttca tcacacatat atgaataata cactcatact 120  
 gccctactac ctgctgcaat aatcacattc ccttctgtgc ctgacctga agccattggg 180  
 gtggctctag tggccatcag tccangcctg cactctgagc ccttgagctc cattgtctac 240  
 nccancccac ctacccgacc ccctcctctt acacagctac ctcttctgtc tctaacccca 300  
 tagattatnt cczaattcaq tcaattcagt tactattaac actctaccag acatgtccag 360  
 caccactggg aagccttctc caggcaacac acacacacac acacacacac acacacatat 420  
 ccaggcacag gttacclcal ctccacaatc acccctttaa ttacustgel atggtgg 477

<210> 149  
 <211> 207  
 <212> DNA  
 <213> Homo sapien

<400> 149  
 acagttgtat tataatatca agaaataaac ttgcaatgag agcatttaag agggaagaac 60  
 taacgtatct tagagagcca aggaagggtt ctgtggggag tgggatgtaa ggtggggcct 120  
 gatgataaat aagaatcagc caggtaagtg ggtgggtgtg tatgggcaca gtgaagaaca 180  
 tttcaggcag agggaacagc agtgaaa 207

<210> 150  
 <211> 111  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(111)  
 <223> n = A,T,C or G

<400> 150  
 accttgattt cattgctgct ctagtggaac cccaactatc taatttagct aaaacatggg 60  
 cacttaaatg tggkacagtgt ttggacttgt taactantgg catctttggg t 111

<210> 151  
 <211> 196  
 <212> DNA  
 <213> Homo sapien

<400> 151  
 agcgcggcag gtcattatga acattccaga tacctatcat tactcgatgc tgttgataac 60  
 agcaagatgg ctttgaactc agggtaacca ccagctattg gaccttacta tgaataaccat 120  
 ggataccaac cggaaaaccc ctatcccgca cagcccactg tggccccac tgtctacgaq 180  
 gtgcacccgg ctacgt 196

<210> 152  
 <211> 132  
 <212> DNA  
 <213> Homo sapien

<400> 152  
 acagcauttt ccctatgcag aaagggaaga ttccctaastg tagggagaag ataacagAAC 60  
 cttccccctt tcatctagtg gtggaaacct gatgctttat gttagacagga atagaaccag 120  
 gagggagttt gt 132

<210> 153  
 <211> 285  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(285)  
 <223> n = A,T,C or G

<400> 153  
 accaanaccca nganaggcca ctggccgtgg tgtcatggcc tccasacatg aaagtgtcag 60  
 ctltctgctct tatgtctctca tctgacaact ctttaccatt ttatccctcg ctacgcagga 120  
 gcacatcaat aaagtccaaa gtcttggaat tggccttggc ttggaggaag tcatcaaac 180  
 cctggctagt gaggtgtggg cgcgctcct ggatgaaggc atctgtgaag togtgacaa 240  
 gtctgcaggc cctgtggaag cgcgctccac acggagtnag gaatt. 285

<210> 154  
 <211> 333  
 <212> DNA  
 <213> Homo sapien

<400> 154  
 accacagtc tgttgggcca gggcttcatg accctttctg tggaaagcca tattalcaac 60  
 acccaaat tttccttaa tatctttaa tgaaggggtc agcctctga clqcaagac 120  
 cctaagccgg ttacacagt a ctccact ggccttgatt tgtgaattg ctgctgctg 180  
 attggacag gactcgaagg tcltcagctc cctcctcgg tggaaagaga ctctgattg 240  
 agtttcacaa attctcgggc cactctgca ttgtctctct gaataaaat ccggagaatg 300  
 gtcaggcctg tctcatcct alggatcttc cgg 333

<210> 155



<211> 308  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(308)  
 <223> n = A, T, C or G

<400> 155  
 actggaata ataaaaaccca catcacagtg ttgtgtcaaa gatcatcagg gcatggatgg 60  
 gaaagtgett tgggaactgl aaagtgccta acacatgac gatgattttt gttataatat 120  
 ttgaatcag gtgcatacaa actctactgc ctgctcctcc tgggccccag cccagcccc 180  
 atcacagctc actgclctgt tcatccaggc ccagcatgta gtggctgatt cttcttggct 240  
 gcttttagcc tccanaagtt tctctgaagc caaccaaacc totangtga aggcattgctg 300  
 gccctggt 308

<210> 156  
 <211> 295  
 <212> DNA  
 <213> Homo sapien

<400> 156  
 accttgctcg gtgcttgaa catattagga actcaaaata tgagatgata ccagtgccca 60  
 ttattgatta ctgagagaac tgttagacat ttagttagag allttelaca cagggaactga 120  
 gaataggaga ttatgtttgg cctcatatt ctctccatc ctcccttggct cattctatgt 180  
 ctaatafatt ctcaatcaa taaggttagc ataatcagga aatcgaccaa ataccaatat 240  
 aaaaaccagat gtctatcctt aaqattttca aatagaaaac aaattaacag actat 295

<210> 157  
 <211> 126  
 <212> DNA  
 <213> Homo sapien

<400> 157  
 acaagtttaa atagtgtgt catgtgcat gtgtgaaat gtgaaatcaa ccacatttch 60  
 gaagagcaaa acaaatctg tcatgtatc totatcttgg gtcgtgagta tatctgtccc 120  
 cttagt 126

<210> 158  
 <211> 442  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(442)  
 <223> n = A, T, C or G

<400> 158  
 acccaactggt cttagaaca cccatcctta atacgatgat tttctgtcg tgtgaaaatg 60  
 aanccagcag gctgccccata gtcagtcctt ccttccagag aaaaagagat ttgagaaagt 120  
 gctgggttaa ttcaacatta atttccctcc ccaaacctcc tgagtcttcc cttaatattt 180  
 ctggttggtt tgaccasagc aggtcatggt ttgtltagca tllaggatcc cagtgaaala 240  
 natgtttgta gccttgcata cttagccctt cccacgcaca aacggaglgg cagctggtg 300  
 ccaaccctgt ttcccaagtc cactgagaca gattcacagt gcaggaattct ggaagctgga 360  
 nacagacggg ctctttgag agccgggact ctgagangga catgagggcc tctgcctctg 420  
 tgttcattct ctgctgtcct gt 442

<210> 159  
 <211> 498  
 <212> DNA

<213> Homo sapi n

<220>

<221> misc feature

<222> (1)...(498)

<223> n - A,T,C or G

<400> 159

acttccagg	aacgttg	tttccgttga	gocfgaactg	atgggtgacg	ttgtagg	60
ccccacaaga	actgaggttg	cagagcgggt	aggggaagagt	gctgttccag	ttgcacctgg	120
gctgtgttg	actgttg	attcctcact	acggcccaag	gttgtggaac	tggcanaaag	180
gtgtgttg	gganttgagc	tggggcggct	gtggtaggtt	gtgggtctct	caacaggggc	240
tgctgtgtg	cggggangtg	aangtgttgt	gtcacttgag	cttggccagc	tctggaaagt	300
antanattct	tctgaaggc	cagcgttgt	ggagctggca	ngggtcantg	ttgtgtgtaa	360
cgaaccagt	ctgtgtggg	tgggtgtano	tctccacaa	agcctgaagt	tctgtgtcten	420
tcaggtaana	atgtgtttc	agtgtccctg	ggcngctgtg	qaaqgttgtg	nattgtcacc	480
aagggaalaa	getgtgt					498

<210> 160

<211> 380

<212> DNA

<213> Homo sapien

<220>

<221> misc feature

<222> (1)...(380)

<223> n - A,T,C or G

<400> 160

aactgcctcc	agcttccctg	ccaaantccac	aaggagacat	caacctctcg	acaggggaaac	60
agcttcaggc	tacttccagg	agacagagcc	acacagcagcc	aaacaantat	tcccatgact	120
ggagcatggc	atagaggagc	ctganaaatg	tggggtctga	ggaagccatt	tgagtctggc	180
cactagacat	ctcatcagcc	acttgtgtga	agagatgccc	catgacccca	gatgcctctc	240
ccacccctac	ctccatctca	cacacttgag	ctttccactc	tgtataattc	taacatctcg	300
gagaaaatg	gcagtttgac	cgaacctgtc	cacaacggta	gaggctgatt	tctaacgaaa	360
cttgtagaat	gaagcctgga					380

<210> 161

<211> 114

<212> DNA

<213> Homo sapien

<400> 161

aactccacatc	cctctgagc	agggcgttgt	cgttcaagg	gtatttggcc	ttgctgtgca	60
cactgtccac	tggccctta	tccacttggt	gcttaalccc	togaagagc	atgt	114

<210> 162

<211> 177

<212> DNA

<213> Homo sapien

<400> 162

acttcttgaa	tggatcaaa	tgatacttag	tgtagtitta	atatcctcat	atatatcaaa	60
gttttaactac	tctgtcaatt	ttgtasaacca	ggttaaccaga	acatccagtc	atacagcttt	120
tggtgatata	taacttggca	ataaccaggt	ctggtgatac	ataaaactac	tcaactgt	177

<210> 163

<211> 137

<212> DNA

<213> Homo sapien

<220>

<221> misc\_feature  
 <222> (1)...(137)  
 <223> n = A,T,C or G

<400> 163

catttataca	gacaggcgtg	aagacattca	cgacaaaacc	gcgaaattct	atcccgtagc	60
canagaaggc	agctacggct	actcctacat	cctggcgtgg	gtggccttcg	cctgcacctt	120
catcagcggc	atgatgt					137

<210> 164  
 <211> 469  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(469)  
 <223> n = A,T,C or G

<400> 164

cttatccaa	tgaatgttct	cctgggcagc	gttgtgatct	tigccacctt	cgtgacttta	60
tgcaatgat	catgtatctt	catacctaatt	gagggagttc	caggagattc	aaccaggaaa	120
tgcattgatc	tcgaaggaga	caaacaccca	ataaactcgg	agtggcagac	tgacaactgt	180
gagacatgca	cttgcctcga	sacagaaatt	tcattgttga	cccttgtttc	tacacctgtg	240
ggttatgaca	sagacaactg	ccaaagaaatc	tccaagaagg	aggactgcan	gtatatcgtg	300
gtggagaaag	aggacccaaa	aaagaacctg	tctgtcagtg	aatggataat	ctaatgtgct	360
cttagtaggc	acagggtctc	caggccaggc	ctcattctcc	tctggcctct	aatagtcaat	420
gatttgttag	ccatgcctat	cagtassaaag	atntttgagc	aaacacttt		469

<210> 165  
 <211> 195  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(195)  
 <223> n = A,T,C or G

<400> 165

acagtttttt	atanatateg	acattgccgg	cacttggtgt	cagtttcaia	aagctgggtg	60
atccgctgtc	atccactatt	ccttggttag	agtaaaaatt	attcctctag	cccatgtccc	120
tgcaggccgc	ccgcctgtag	ttctcgttcc	agtcgtcttg	gcacacaggg	tgccaggact	180
tcctctgaga	tgagt					195

<210> 166  
 <211> 383  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(383)  
 <223> n = A,T,C or G

<400> 166

acattcttagt	agtgtggcac	atcaggaggc	catcagggtc	acagtcactc	atagcctcgc	60
cgaggctcga	gtccacacca	ccggtgtagg	tgtgtctaat	cctgggcttg	gcgccacact	120
ttggagaagg	gatattgctg	acacacatgt	ccacaaagcc	tgtgactcgc	ccaaagattt	180
tttgcagacc	agcctgagca	aggggcggat	gltcagcttc	aglcctctct	tcgtcagggtg	240
gatgccaaac	tcgtctangg	tcctgtggga	gctggctgac	acntcaccta	caacctgggc	300
gangatotta	taaagaggct	cmagataaa	ctccacqaaa	cttctctagg	agctgctagt	360

ngggggccttt ttggtgaact ttc

383

<210> 167  
 <211> 247  
 <212> DNA  
 <213> Homo sapien  
 <220>  
 <221> misc\_feature  
 <222> (1)...[247]  
 <223> n = A,T,C or G

<400> 167  
 acagagccag accttggcca taaatgaanc agagattaag actaaacccc aagtcganat 60  
 tggagcagaa actggagcaa gaagtgggcc tggggctgaa gtagagacca aggccactgc 120  
 tatancata cacagagcca actctcaggc caaggcnatg gttggggcag anccagagac 180  
 tcaalctgan tccaaaatgg tggctggaac actggctcatg acanaggcag tgactctgac 240  
 tgaagtc 247

<210> 168  
 <211> 273  
 <212> DNA  
 <213> Homo sapien  
 <220>  
 <221> misc\_feature  
 <222> (1)...(273)  
 <223> n = A,T,C or G

<400> 168  
 acttctaagt ttctagaag tgggaggatt gtantcatcc tgaaaatggg tttacttcaa 60  
 aatccctcan ccttggttctt cactactgct tatactgana gtgtcatgtt tccacaaagg 120  
 gctgacacct gagcctgnat ttbcactcat ccttgagaag cctttccag taggggtggc 180  
 aattcccaac ttacttgcca caagcttccc aggttttctc ccttggaata ctccagcttg 240  
 agtcccatgat acactcatgg gctgacctgg gca 273

<210> 169  
 <211> 431  
 <212> DNA  
 <213> Homo sapien  
 <220>  
 <221> misc\_feature  
 <222> (1)...(431)  
 <223> n = A,T,C or G

<400> 169  
 acagccttgg ctccccca ctcacagtc tcaatgcaga aagatcatct tccagcagtc 60  
 agctcagacc aggttcagag gatgtgacal caacagtttc tggtttcaga acaggttcta 120  
 ctactgtcaa atgcccccc atacttccic aaaggtgtg gtaagtcttg cacaggtgag 180  
 ggcagcagaa agggggtant tactgatgga ccccatcttc ttgtatact ccacactgac 240  
 cttgccatgg gcaaggccc ctaccacaaa acaaatagga tcaatgctgg gcaccagctc 300  
 acccacatca ctgcaaccg ggatggaaaa agaatgcca acttcatac atccaaactg 360  
 aaagtgtct gatactggat tcttaattac ctlcacaaagc ttctgggggc catcagctgc 420  
 tgaacactg a 431

<210> 170  
 <211> 266  
 <212> DNA  
 <213> Homo sapien  
 <220>

55

<221> misc\_feature  
 <222> (1)...(266)  
 <223> n = A,T,C or G

<400> 170  
 acctgttgggc tgggclgtta tgectgtgcc ggctgctgaa agggagttca gaggtggagc 60  
 tcaaggagct ctgcaggcat ttgccaanc ctctccanag canagggagc aacctacact 120  
 ccccgctaga sagacaccag attggagtcg tgggaggggg agttgggggtg ggcatttgat 180  
 gtatacttgt cacttgatg aangagccag agaggaanga gacgaanatg anattggcct 240  
 tcaaaagctag gggctctggca ggtgga 266

<210> 171  
 <211> 1248  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(1248)  
 <223> n = A,T,C or G

<400> 171  
 ggcagccaaa tcataaacgg cgaggactgc agcccgcact cgcagccctg gcaggcggca 60  
 ctggtcatgg aaaacgaatt gttctgctcg ggcglcctgg tgcacccga gtgggtgctg 120  
 tcagccgcac actgtttcca gaagttagtg cagagctcct acaccatcgg gctgggctg 180  
 cacagtcttg aggcagacca agagccaggg agccagatgg tggaggccag cctctccgta 240  
 cggcaccacag agtaccacag acccttgctc gctaaccgac tcatgctcat caagttggac 300  
 gaatecgtgk ccgagctctga caccatccgg agcatcagca ttgcttcgca gtgcoctacc 360  
 gcggggaaact cttgcctcgt ttctggctgg ggtctgctgg cgaacggcag aatgcoctacc 420  
 gtgctgcagt gcgtgaacgt gtoggtgggtg tctgaggagg tctgcagtaa gctctatgac 480  
 ccgctgtacc accccagcat gttctgcgcc ggccggaggc aagaccagaa ggactcctgc 540  
 aacggtgact ctggggggcc cctgatctgc aacgggtact tgcaggggcct tgtgtcttcc 600  
 ggaaaagccc cgtgtggcca agttggcgtg ccaggtgtct acacuaacct ctgcaaatlc 660  
 actgagtggg tagagaaaac cgtccaggcc agttaactct ggggactggg aacctatgaa 720  
 attgaccccc anatacatcc tgcgggaagg attcaggaa atctgttccc agccctctcc 780  
 ccctcaggcc caggagtcca ggcocccagc ccctctctcc tcaccccaag ggtacagatc 840  
 cccagccact cctccctcag aaccagggt ccagaccccc cagccctcc cccctcagac 900  
 ccaggagtcc agccctctcc cctccagacc caggagtcca gaccccccag cccctctctc 960  
 ctccagacca gggglccagg ccccccaccc ctctctctcc agactcagag gtccaagccc 1020  
 ccaacccctc attcccccag cccagagggt cagggtccag cccctctctc ctccagacca 1080  
 ggggtccaat gccacctaga ctntccctgt acacagtgcc cccttgtggc acgttgaccc 1140  
 aaccllaccg gttggttttt catTTTTngt ccctttcccc tagatccaga aataaagttt 1200  
 aagaggaagng caaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaa 1248

<210> 172  
 <211> 159  
 <212> PRT  
 <213> Homo sapien

<220>  
 <221> VARIANT  
 <222> (1)...(159)  
 <223> Xaa = Any Amino Acid

<400> 172  
 Met Val Glu Ala Ser Leu Ser Val Arg His Pro Glu Tyr Asn Arg Pro  
 1 5 10 15  
 Leu Leu Ala Asn Asp Leu Met Leu Ile Lys Leu Asp Glu Ser Val Ser  
 20 25 30  
 Glu Ser Asp Thr Ile Arg Ser Ile Ser Ile Ala Ser Gln Cys Pro Thr  
 35 40 45  
 Ala Gly Asn Ser Cys Leu Val Ser Gly Trp Gly Leu Leu Ala Asn Gly

50  
 Arg Met Pro Thr Val Leu Gln Cys Val Asn Val Ser Val Val Ser Glu  
 65  
 Glu Val Cys Ser Lys Leu Tyr Asp Pro Leu Tyr His Pro Ser Met Phe  
 70  
 Cys Ala Gly Gly Gln Xaa Gln Xaa Asp Ser Cys Asn Gly Asp Ser  
 80  
 Gly Gly Pro Leu Ile Cys Asn Gly Tyr Leu Gln Gly Leu Val Ser Phe  
 90  
 Gly Lys Ala Pro Cys Gly Gln Val Gly Val Pro Gly Val Tyr Thr Asn  
 100  
 Leu Cys Lys Phe Thr Glu Trp Ile Glu Lys Thr Val Gln Ala Ser  
 110  
 120  
 130  
 140  
 150  
 155

&lt;210&gt; 173

&lt;211&gt; 1265

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc feature

&lt;222&gt; (1)...(1265)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 173

ggcagccccc	actgcagccc	ctggcagggc	gcactgggtca	tggaaaacga	attgttctgc	60
tccggcgctcc	tggtgcaccc	gcagtgggtg	ctgtcagccc	cacactgttt	ccagaactcc	120
tacaccatcg	ggctgggccc	gcacagtctt	gaggccgacc	aagagccagg	gagccagatg	180
gtggaggcca	gcctctccgt	acggcaccca	gagtacaaca	gaccttgc	cgctaaccac	240
ctcatgctca	tcaagttgga	cgaatccgtg	tccgagctcg	acaccatccg	gagcatcagc	300
attgtctcgc	agtgcctcac	cgcggggaac	tcttgctctg	tttctggctg	gggtctgctg	360
gcgaacgggtg	agctcacggg	tgtgtgtctg	ccctcttcaa	ggaggtcctc	tgcccagtcg	420
cggggggtga	cccagagctc	tgcgtccccc	gcagaatgcc	taccgtgctg	cagtgcgtga	480
acgtgtcggg	gggtgtctgag	gaggtctgca	gtaagctcta	tgaccgctg	taccacccca	540
gcctgtttctg	cgcggggcga	gggcaagacc	agaaggactc	ctgcacgggt	guctctgggg	600
ggccctctga	ctgcaacggg	tacttgaggg	gccttctgtc	tttcggaaaa	gcccctgtgt	660
ggcaggcttg	cgtgcacggg	gtclacacca	acctctgcga	attcactgaq	lqgatagaga	720
aaaccgtcca	ggccagttaa	ctctggggac	tggaacccca	tgaaatlgac	ccccaaatac	780
atcctgcgga	aggaattcag	gaatatctgt	tcccagcccc	tcttccctca	ggccnaggag	840
tccaggcccc	cagcccccct	tccctcaaac	caagggtaca	gatccccagc	ccctctctcc	900
tcagaccrag	gagtcacagc	ccccnagccc	ctctctccct	agacccagga	gtccagcccc	960
tctccntca	gacccaggag	tccagacccc	ccagccccct	ctccctcaga	cccagggttt	1020
gaggccccca	accctctctc	cttcagagtc	agaggtccaa	gcccccaacc	cctcgttccc	1080
cagaccagga	ggtnnaggtc	ccagccccct	ttccntcaga	cccagnggtc	caatgccacc	1140
tagattttcc	ctgnacacag	tgcccccttg	tggnangttg	acccaacctt	accagttggc	1200
ttttcatttt	tngtcccttt	cccttagatc	cagaaataaa	gtttaagaga	ngngcaaaaa	1260
aaaaa						1265

&lt;210&gt; 174

&lt;211&gt; 1459

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc feature

&lt;222&gt; (1)...(1459)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 174

ggtcagccgc	acactgtttc	cagaagtgag	tgccagagtc	ctacaccate	gggctgggcn	60
tgccagctct	tgaggccgac	caagagccag	ggagccagat	gggtggaggcc	agcctctncc	120
tacggcacc	agagtacaac	agacccctgc	tcgctaaccg	cctcatgctc	atcaagttgg	180

acgaatccgt	gtccgagtct	gacaccatcc	ggagcatcag	cattgcttcg	cagtgcctta	240
ccgcggggaa	ctcttgcttc	gtttctggct	ggggctgct	ggcgaacgg	gagctcacgg	300
gtgctgtct	gcccctctca	aggaggtcct	ctgcccagtc	gcgggggctg	acccagagct	360
ctgcgtccca	ggcagaatgc	ctaccgtgct	gcagtgctg	aacgtgctgg	tggtgtclga	420
ngaggtctgc	antaaagctcl	atgacccgct	gtaccaacccc	ancatgttcl	gcgccggcgg	480
agggcaagac	cagaaggaact	cctgcaacgl	ggagagaggg	aaaggggagg	gcaggccgact	540
cagggaagg	tggaggaagg	ggagacagag	acacacaggg	ccgcctggcg	agatgcagag	600
atggagagac	acacagggag	acagtgacaa	ctagagagag	aaactgagag	aaacagagaa	660
ataaacacag	gaataagag	aagcaagga	agagagaaac	agaaacagac	atgggggggc	720
agaaacacac	acacatagaa	atgcagttga	ccttccaaaca	gcctgggggc	tgaggggcgt	780
gacctccacc	caatagaaaa	tectcttata	acttttgact	ccccaaaaac	ctgactagaa	840
atagcctact	gttgacgggg	agccttacca	ataacataaa	tagtgcgatt	atgcatacgt	900
tttatgtcat	catgatatac	ctttgttgga	attttttgat	atttctaagc	tacacagttc	960
gtctgtgaat	tttcttaaat	tggtgcaact	ctcctaaaaat	ttttctgatg	tgtttattga	1020
aaaaatccaa	gtataagtgg	acttgtgcat	tcaaacagg	gttgttcaag	ggtcaactgt	1080
gtaccacagag	ggaaacagtg	acacagattc	atagaggtga	aaacagagga	gaaacaggaa	1140
aaatcaagac	tctacaaaga	ggtcgggag	ggtggtcat	gcctgtaatc	ccagcacttt	1200
gggaggogag	gcaggcagat	cacttgaggt	aaggagttca	agaccagcct	ggccaaaatg	1260
gtgaaatcct	gtctgtacta	aaaatacaaa	agttagctgg	atatggtggc	aggogcctgt	1320
aatcccagct	acttgggag	ctgaggcag	agaattgctt	gaatatggga	ggcagaggtt	1380
gaagtgaatt	gagatcacac	cactatactc	cagctggggc	aacagagtaa	gactctgtct	1440
caaaaaaaaa	aaaaaaaaa					1459

<210> 175  
 <211> 1167  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature  
 <222> (1)...(1167)  
 <223> n - A,T,C or G

<400> 175						
ggcagccct	ggcagggggc	actggtcatg	gaaaacgaat	tggtctgctc	gggcgtcctg	60
gtgcatacgc	agtgggtgct	gtcagccgca	cactgtttcc	agaactccta	caccatcggg	120
ctgggcctgc	acagtccttga	ggccgaccaa	gagccaggga	gccagatggg	ggaggccagc	180
ctctccgtac	ggcaccacaga	gtacaaacaga	ctcttgcctg	ctaacgacct	catgctcctc	240
aagtlgagc	aatccglgtc	cgaatctgac	accatccggg	gcatacagcat	tgcttcgcag	300
hccctaccg	cggaqaactc	ctgcccctgt	tctggtctgg	gtctgctagg	gaacggcagg	360
atgcctacgc	tgctgcactg	cgtgaacgtg	tcggtggtgt	ctgaggangt	ctgcagtaag	420
ctctatgacc	cgtgttacc	ccccagcatg	ttctggcgcc	gcggaggggc	agaccagag	480
gactcctgca	acggtgactc	tgggggggccc	ctgatctgca	acgggtactt	gcagggcctt	540
gtgtctttcg	gaaaagcccc	gtgtggccaa	cttggcgtgc	caggtgtcta	caccacacct	600
tgcaaatcca	ctgagtggtat	agagaaaaac	gtccagncce	gttaactctg	gggactggga	660
acccatgaaa	ttgaccccc	aatacatcct	gcggaangaa	ttcagggaata	tctgttccca	720
gcccctcctc	cctcaggccc	aggagtccag	gccccagccc	cctcctcctc	caaaccaagg	780
gtacagatcc	ccagcccctc	ctccctcaga	cccaggagtc	cagacccccc	agcccctcct	840
ccntcagacc	caggagtcca	gcccctcctc	cntcagacgc	aggagtccag	accccctcgc	900
ccntcctcgc	tcagacccag	gggtgcaggc	ccccaacccc	tctcctcctc	gagtcagagg	960
tccaagcccc	caaccccctg	ttcccagac	ccagaggtnc	aggctccagc	cctcctcctc	1020
tcagacccag	cggtccaatg	ccacotagan	intccctgta	cacagtgcct	ccttgtggca	1080
ngttgaccca	accttaccag	ttggtttttc	attttttgtc	ccttccccc	agatccagaa	1140
ataaagtnta	agagaagcgc	aaaaaaa				1167

<210> 176  
 <211> 205  
 <212> PRT  
 <213> Homo sapien

<220>  
 <221> VARIANT

&lt;222&gt; (1)...(205)

&lt;223&gt; Xaa = Any Amino Acid

&lt;400&gt; 176

Met	Glu	Asn	Glu	Leu	Phe	Cys	Ser	Gly	Val	Leu	Val	His	Pro	Gln	Trp
1				5					10					15	
Val	Leu	Ser	Ala	Ala	His	Cys	Phe	Gln	Asn	Ser	Tyr	Thr	Ile	Gly	Leu
			20					25					30		
Gly	Leu	His	Ser	Leu	Glu	Ala	Asp	Gln	Glu	Pro	Gly	Ser	Gln	Met	Val
		35					40					45			
Glu	Ala	Ser	Leu	Ser	Val	Arg	His	Pro	Glu	Tyr	Asn	Arg	Leu	Leu	Leu
	50					55					60				
Ala	Asn	Asp	Leu	Met	Leu	Ile	Lys	Leu	Asp	Glu	Ser	Val	Ser	Glu	Ser
65					70					75				80	
Asp	Thr	Ile	Arg	Ser	Ile	Ser	Ile	Ala	Ser	Gln	Cys	Pro	Thr	Ala	Gly
			85					90						95	
Asn	Ser	Cys	Leu	Val	Ser	Gly	Trp	Gly	Leu	Leu	Ala	Asn	Gly	Arg	Met
			100					105					110		
Pro	Thr	Val	Leu	His	Cys	Val	Asn	Val	Ser	Val	Val	Ser	Glu	Xaa	Val
			115				120					125			
Cys	Ser	Lys	Leu	Tyr	Asp	Pro	Leu	Tyr	His	Pro	Ser	Met	Phe	Cys	Ala
	130					135					140				
Gly	Gly	Gly	Gln	Asp	Gln	Lys	Asp	Ser	Cys	Asn	Gly	Asp	Ser	Gly	Gly
145					150					155				160	
Pro	Leu	Ile	Cys	Asn	Gly	Tyr	Leu	Gln	Gly	Leu	Val	Ser	Phe	Gly	Lys
			165					170						175	
Ala	Pro	Cys	Gly	Gln	Leu	Gly	Val	Pro	Gly	Val	Tyr	Thr	Asn	Leu	Cys
			180					185					190		
Lys	Phe	Thr	Glu	Trp	Ile	Glu	Lys	Thr	Val	Gln	Xaa	Ser			
	195					200						205			

&lt;210&gt; 177

&lt;211&gt; 1119

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 177

gagcactcgc	agccctggca	ggcggcactg	gtcatggaaa	acgaattgtt	ctgctcgggc	60
gtcctgggtg	atccgcagtg	ggtgctgtca	gcccacacac	gtttccagaa	clcctacacc	120
atcgggctgg	gcctgcacag	tcttgaggcc	gaccaaagag	cagggagcca	gatgggtggg	180
gcccagctct	cgtacggca	cccagagtac	aacagacctt	tgtctcgtac	cagcctcatg	240
ctcatcagtg	tggacgaatc	cgtgtccgag	tctgacaccc	cccggagcat	cagcattgct	300
tgcagtgccc	ctaccgcggg	gaactcttgc	ctcgtttctg	gctgggggtc	gctggcgaac	360
gatgctgtga	ttgccatcca	gtcccagact	glgggagcct	gggagtgtga	gaagctttcc	420
caacccctgg	agggttgtac	catttcggca	acttccagtg	caaaggacgt	ctgctgcate	480
ctcacagggg	gtctcctact	gtcactgca	tcacccggaa	caactgtgat	aactagccag	540
caccatagtt	ctccgaagtc	agactatcat	gattactgtg	ttgactgtgc	tgtctattgt	600
actaacccatg	cagatgttta	ggtgaattta	gcgtcaactg	gcctcaacca	tcttggtatc	660
cagttatcct	cactgaattg	agatttctct	cttcagtgte	agccattccc	acataatttc	720
tgaactacag	agggtgaggga	tcatatagct	cttcaaggat	gotggtaact	ccctcacaaa	780
ttcattttct	ctggttgtagt	gaaagggtgc	ccctctggag	cctcccaggg	tgggtgtgca	840
ggtcacatag	atgaatgtat	gatcgtgttc	ccattaccca	aagcctttta	atccctcatg	900
ctcagtcac	cagggcaggt	ctagcatttc	ttcatttagt	gtatgctgtc	cattcatgca	960
accacctcag	gactcctgga	ttctctgcct	agttgagctc	ctgcatgtgt	cctccttggg	1020
gaggtgaggg	agagggccca	tggttcaatg	ggatctgtgc	agttgtaaca	cattaggtgc	1080
ctaataaaca	gaagctgtga	tggttaaaaa	aaaaaaana			1119

&lt;210&gt; 178

&lt;211&gt; 164

&lt;212&gt; PRT

&lt;213&gt; Homo sapien



<220>  
 <221> VARIANT  
 <222> (1)...(164)  
 <223> Xaa - Any Amino Acid

<400> 178  
 Met Glu Asn Glu Leu Phe Cys Ser Gly Val Leu Val His Pro Gln Trp  
 1 5 10 15  
 Val Leu Ser Ala Ala His Cys Phe Gln Asn Ser Tyr Thr Ile Gly Leu  
 20 25 30  
 Gly Leu His Ser Leu Glu Ala Asp Gln Glu Pro Gly Ser Gln Met Val  
 35 40 45  
 Glu Ala Ser Leu Ser Val Arg His Pro Glu Tyr Asn Arg Pro Leu Leu  
 50 55 60  
 Ala Asn Asp Leu Met Leu Ile Lys Leu Asp Glu Ser Val Ser Glu Ser  
 65 70 75 80  
 Asp Thr Ile Arg Ser Ile Ser Ile Ala Ser Gln Cys Pro Thr Ala Gly  
 85 90 95  
 Asn Ser Cys Leu Val Ser Gly Trp Gly Leu Leu Ala Asn Asp Ala Val  
 100 105 110  
 Ile Ala Ile Gln Ser Xaa Thr Val Gly Gly Trp Glu Cys Glu Lys Leu  
 115 120 125  
 Ser Gln Pro Trp Gln Gly Cys Thr Ile Ser Ala Thr Ser Ser Ala Arg  
 130 135 140  
 Thr Ser Cys Cys Ile Leu Thr Gly Cys Ser Leu Leu Thr Ala Ser  
 145 150 155 160  
 Pro Gly Thr Leu

<210> 179  
 <211> 250  
 <212> DNA  
 <213> Homo sapien

<400> 179  
 ctggagtgcc ttggtgtttc aagccctgc aggaagcaga atgcaccttc tgaggcacct 60  
 ccagctgccc ccggccgggg gatgcgaggc tcggagcacc cttgcccggc tgtgattgct 120  
 gccaggcaact gttaatatca gttttctgt cctttgtctc ccggcaagcg cttctgtctg 180  
 aagttcatat ctggagcctg atgtcttaac gaataaggt cccatgctcc aaccgaaaaa 240  
 aaaaaaaaaa 250

<210> 180  
 <211> 202  
 <212> DNA  
 <213> Homo sapien

<400> 180  
 actagtcagg ttgtgtgga ttccattgtg ttgggcccaa cacaatggct acctttaaca 60  
 tcacccagac ccggccctg ccagtgccc acgtgctgc taacgacagt atgatgotta 120  
 ctctgtact cggaaactat ttttatgtas ttaatgtatg cttctgtgtt tataaatgcc 180  
 tgatttaaaa aaaaaaaaaa aa 202

<210> 181  
 <211> 558  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(558)  
 <223> n = A,T,C or G

<400> 181  
 tccytttktgk nagggtttkkg agacacmccck agacctwaan ctgtgtcaca gacttcynqg 60  
 aatgttttagg cagtgttagt aatttcytcg taatgattct gttattactt tcttnattct 120  
 ttattcctct ttcttctgaa gattaatgaa gttagaaaatt gaggtggata aatac00000 180  
 ggtagtgtga tagtataagt atctaagtgc agatgaaagt gtgttatata tatccattca 240  
 aaattatgca agtttagtaat tactcagggt taactaaatt actttaatat gctgttgaac 300  
 ctactctgtt ccttggctag aaaaaattat aaacaggact ttgttagttt gggagggcna 360  
 attgataata ttctatgttc taaaagttag gctatacata aattattaag aaatatggaw 420  
 ttttattccc aggaatatgg kgttcatttt atgaatatta csurggetag awgtwlgagt 480  
 aaaaycagtt ttggtwaata ygtwaatat tcmteaataa acaakgcttt gacttatttc 540  
 caaaaaaaa aaaaaaaa 550

<210> 182  
 <211> 479  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(479)  
 <223> n = A,T,C or G

<400> 182  
 acagggwttk grggtgcta agacccorga rwtggtttga tccaaccctg gottwtttcc 60  
 agaggggaaa atggggccta gaagttacag macatytagy tgggtggmtg gcacccctgg 120  
 cctcacacag aatcccgagt agctgggact acagggcacac agtcaatgaa gcaggccctg 180  
 ttwgcaattc acgttgccac ctccaactta aacattcttc atatgtgatg tcttagtca 240  
 ctaaggttaa actttccac ccagaaaagg caacttagat aaaaatcttag agtaacttca 300  
 tactmticta agtctcttcc cagcctcact kkgagtccm cytgggggtt qataggaant 360  
 ntctcttggc ttctccaata aartctctat ycatctcatg ttttaatttg tacgcclara 420  
 awtgatgara aaattaaaat gttctggtty maactttaaaa aruaaaaaaa aaaaaaaa 479

<210> 183  
 <211> 384  
 <212> DNA  
 <213> Homo sapien

<400> 183  
 aggggggggc agaggttasa gccaaagccc aagaagagtg gcagtgcacg cactgggtgac 60  
 agl0ccagta ccaataacag tgccagtgc agtgccagba ccagtgggtg cttcagtgtc 120  
 ggtgccagcc tgaccggcac tctcacattt gggctcttcc ctggccttgg tggagctggt 180  
 gccagcacca gtggcagctc tgggtgctgt ggtttctctt acaagtgaga ttttagatat 240  
 tgttatctt gccagtcttt ctcttcaagc caggggtgcat cctcagaaac ctactcaaca 300  
 cagcaactta ggcagccact atcaatcaat tgaagttgac actctgcatt aratctattt 360  
 gccatttcaa aaaaaaaaaa aaaa 384

<210> 184  
 <211> 496  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(496)  
 <223> n = A,T,C or G

<400> 184  
 acugaatttg gaccgctggc ttataagcga tcatgtyynt ccrgtatkae ctcaacgagc 60  
 agggagatcg agtclatacg ctgaagaaat ttgacccgat gggacaacag aactgtctag 120  
 cccatcttgc tgggttctcc ccagatgaca aatactctag acaccgaate accatcaaga 180  
 aacgcttcaa ggtgctcatg acccagcaac cgcgcctgt cctctgaggg tcccttaaac 240  
 tgalgtcttt tctgccacct gttacccctc ggaagctcag taaccaaaact cttcgagctg 300

tgagccctga	tgcctttttg	ccagccatag	tclttggcat	ccagtccttc	gtggcgattg	360
attatgcttg	tgtgagggaa	tcctgggtgc	ctcaccata	aaagggaacac	atttgaacttt	420
ttttctcat	atttttaatt	actacmagaw	tcttwwmagaw	waatgawtt	gaaaaactst	480
taaaaaaaaa	aaaaaa					496

<210> 185  
 <211> 384  
 <212> DNA  
 <213> Homo sapien

<400> 185						
gctggtagcc	tatggcgkcg	cccacggagg	ggctcctgag	gccacgggrac	agtgaacttcc	60
caagtatcyt	gcgcgcgctc	ttctaccgtc	cctacctgca	gatcttcggg	cagattcccc	120
aggaggscat	ggacgtggcc	ctcatggagc	acagcaactg	ytcttcggag	cccggtttct	180
gggcacaccc	tcctggggcc	caggcgggca	ctcgctctc	ccagtatgcc	aactggctgg	240
tggtgctgct	cctcgctcgc	ttcctgctcg	tggccaacat	cctgctggtc	aacttgcaca	300
ttgccatgtt	cagttacaca	ttcggcaaa	tacagggcaa	cagcgatctc	tactgggaag	360
gcgcagcgtt	accgcctcat	ccgg				384

<210> 186  
 <211> 577  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)... (577)  
 <223> n - A,T,C or G

<400> 186						
gagttagctc	ctccacaacc	ttgatgaggt	ogtctgcagt	ggcctctcgc	ttcataccgc	60
tnccatctgc	atactgtagg	tttgcaccca	cytoctggca	tcttggggcg	gcntaatatt	120
ccaggaaact	ctcaatcaag	tcaccgtoga	tgaacccgtg	gggctgggtc	tgtcttcgcg	180
tcgggttgaa	aggatctccc	agaaggagtg	ctcgatcttc	cccacacttt	tgatgacttt	240
attgagtcga	ttctgcatgt	ccagcaggag	gttgtaccag	ctctctgaca	gtgaggtcac	300
cagccctatc	atgcgcttga	mcgtgcggaa	garcaaccag	ccttgtgtgg	gggkkaagt	360
ctcaccacga	ttctgcatta	ccagagagcc	gtggcacaag	acattgacaa	aotcggccag	420
gtggaaaaag	amucmctcel	ggargtqctn	gcgctctc	gtcmgttggt	ggcagcgctw	480
tccttttgac	acacaaacaa	gttaaaagga	cttccagccc	ccagaaantt	gtcatcatcc	540
aaagtntcgc	acagcaactna	tcagllqgg	attcaat			577

<210> 187  
 <211> 534  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)... (534)  
 <223> n = A,T,C or G

<400> 187						
aacatcttcc	tgtataatgc	tgtgtaatat	cgatccgatn	ttgtctgstg	agaatycatw	60
actkggaaaa	gmaacattaa	agcctggaca	ctggtattaa	aattccacaat	atgcaacact	120
ttapacagtg	tgtaaatctg	ctcccyynac	tttgtcatca	ccagtctggg	aakaagggtg	180
tgccctatcc	acacctgtta	aaagggcgct	aagcattttt	gattcaacat	cttttttttt	240
gacacaagtc	cgaaaaaagc	aaaagtaaaa	agllatyaat	ttgttagcna	attcaacttcc	300
ttcatgggac	ag gccatyt	gatttcaaaa	gcnaatttgc	laatattgag	cttyggggagc	360
tgatalttga	gcggaaagagc	agccttttctc	cttcaccaga	cccaaccccc	tttcatattg	420
ggatgttnac	naaagtwtatg	tccttwacag	atgggagcgt	tttgaggcaa	ttctattctg	480
aggaclcccc	agtttattta	ccacttgccac	aagaaggcgt	tttcttcttc	aggg	534

62

<210> 188  
 <211> 761  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature  
 <222> {1}...{761}  
 <223> n = A,T,C or G

<400> 188  
 agaaaccagt atctctnaaa acaacctctc atacctgtg gacctaatit tgtgtgcgtg 60  
 tgtgtgtgcg cgcataattat atagacaggg acatcttttt tacttttcta aaagcttatg 120  
 cctcttttgt atctatatct gtgaaagttt taatgatctg ccataatgtc ttggggacct 180  
 ttgtcttctg tgtaatggt actagagaaa acacctatnt tatgagtcas tatagttngt 240  
 ttattcgac atgaaggaaa ttccagatn ccacacclna caaacctctc clkgackarg 300  
 ggggacaaag aaaaagcaaaa ctgacatata caaacctwe cctgggtgag arttgcataa 360  
 acagaaatwr ggtagtatat tgaarnacag catcattaaa rmgtttwkttt wtctccctt 420  
 gcaaaaaaca tgaacgaact tcccggtgag laatgccaag ttgttttttt tatnataaaa 480  
 cttgcctctc attacatgtt tnaaagtggg gtgggtggggc aaatatattga aatgatggaa 540  
 ctgactgata aagctgtaca aalaagcagt gtgcctaaca agcaacscag taatgttgac 600  
 atgcttaatt ccaaatgtgt aatttcatta taaatgtttg ctaaaataca ctttgaacta 660  
 tttttctgtt tcccaagagc tgagatntta gattttatgt agtatnaagt gaaaaantac 720  
 gaaaal.ata acattgaaga aaaaananaa aaanaaaaaa a 761

<210> 189  
 <211> 482  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature  
 <222> {1}...{482}  
 <223> n = A,T,C or G

<400> 189  
 tttttttttt ttgtccgatn ctactatttt attgcaggan gtgggggtgt atgcacogca 60  
 caccggggct atnagaagca agaaggaagg agggagggca cagcccttg ctgagcaaca 120  
 aagccgcctg ctgccttctc tgtctgtctc ctgggtgcagg cacatgggga gaccttcccc 180  
 aaggcagggg ccaccagtcg aggggtggga atacaggggg tgggagtggt gcataagaag 240  
 tgataggcac aggcaccccg gtacagaccc ctgggtcctt gacaggtnga ttgcagccag 300  
 gtcattgtgc cctgcccagg cacagcgtan atctggaaaa gacagaatgc ttctcttttc 360  
 aaatttggct ngtcatngaa ngggcanitt tccaanitng gctnggtctt ggtacncttg 420  
 gttcggccca gctccnctc caaaaantat tcccccnct ccaattgct tgcnggnucc 480  
 cc 482

<210> 190  
 <211> 471  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature  
 <222> {1}...{471}  
 <223> n = A,T,C or G

<400> 190  
 tttttttttt ttttaaaaca gtttttcaca aaaaaatita ttagaagaat agtggttttg 60  
 aaaactctcg catccagtga gaactaccat acaccacatt acagctngga atgtncctca 120  
 aatgtctggt caaatgatac aatggaacca ttcaatotta cacatgcacg aaagaacaag 180  
 cgtttttgac atacaatgca caaaaaaaa aggggggggg gaccacatgg attaaaaatt 240  
 taagtactca tcacatacat taagacacag tttagtucca gtcnaaaato agaactgnt 300

```
<210> 191
<211> 402
<212> DNA
<213> Homo sapien
```

```
<220>
<221> misc_feature
<222> {1}...{402}
<223> n = A,T,C or G
```

<400> 191						
gagggattga	aggtctgttc	taatgtcggm	ctgttcagcc	accacctcta	acaagtgtgt	60
gtcttccact	cactgtctgt	aagcttttta	accagacwg	tatcttcala	aatagaacaa	120
attcttcacc	agtcacatct	tataggacct	ttttggatcc	agttagtata	agctcttcca	180
cttcctttgt	taagaattca	tctggtaaag	tcttaagttt	lqlagaaagg	aattyaattg	240
ctcgtttctt	aacaattgtc	tctccttgaa	gtatttytgt	gaacaaccca	cctaaggtcc	300
ctttgtgcac	ccattttaaa	tatacttaat	agggaattgk	lncactaggt	taattcttgc	360
aagagtcata	tgtcttcaaa	aatttcctta	gtctctctac	ca		402

```
<210> 192
<211> 601
<212> DNA
<213> Homo sapien
```

```
<220>  
<221> misc_feature  
<222> {1}...{601}  
<223> D ~ A,T,C or G
```

<400> 192						
gagctcggat	ccaataatct	ttgtctgagg	gcagcacaca	lalncaagtgc	catggnaact	60
ggtctacccc	acatgggagc	agcatgcugt	agntatataa	ggctattccc	tgagtcagac	120
atgcytyttt	gaytaccgtg	tcccaagtgc	tggtgaltct	yaacacacyt	ccatcccggt	180
cttttctgga	aaaactggcc	cttktctgga	actagcarga	catcacttac	aaattcaccc	240
acgagacact	tgaaggctgt	accaaagcga	ytcttgcat	gctttttgtc	cctccggcac	300
cagttgtcaa	tactaacccg	ctggtttgcc	tccatcacat	ttgtgatctg	tagctctgga	360
tacatctcct	gacagtcctg	aggaacttct	tcttttgttt	caaaagcacc	tcttgggtgc	420
tgltggalca	ggttcccatt	tcccagtcyg	aatgttcaca	tggcatattt	wacttcccac	480
aaacacattgc	gatttgaggc	tcagcaaacg	caaatcctgt	tccggcattg	gctgcgaagag	540
ntcagatgta	gccggccragc	gccaaaggcag	gcgccgtgag	ccccaccagc	agcagaaayca	600
g						601

```
<210> 193
<211> 608
<212> DNA
<213> Homo sapien
```

```
<220>
<221> misc feature
<222> {1}...{608}
<223> n = A, T, C or G
```

<400> 193						
atacagccca	natccacca	cgaagatgcg	cttgttgact	gagaacctga	tgcggtcact	60
ggtcccgctg	tagccccagc	gactctccac	ctgctggaag	cggttgatgc	tgcactcytt	120
cccaacgcag	gcagmagcgg	gscoggtc aa	tgaactccay	tcgtagcttg	gggtkgacgg	180
tkaagtgcag	gcagagctctg	accaactcgc	ggtccaccag	gatgcccgac	tgtcggggac	240
ctgcagcgaa	actctctgat	ggtcatgagc	gggaagcgaa	tgaagcccaq	ggcctgtccc	300

```

agaacattcc gactgtttctc tggcgtcacc tgcagctgct gccgctgaca ctgggectcg      360
gaccagcgga caaacggcrt tgaacagccg cactcaccg atgcccagtg tgcggcgctc      420
caggammgsc accagcgtgt ccaggtcaat gtgggtgaaq cccctccgcg gtretggcgt      480
ctgcagtggt tttgtcgatg ttctccaggc acaggtctgc cagctgcggc tcatcgaaga      540
gtcggcgctg cgtgagcage atgaaggcgt tglcggctcg cagttcttct tcaggaaactc      600
cagcaat                                           608

```

```

<210> 194
<211> 392
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(392)
<223> n - A,T,C or G

```

```

<400> 194
gaacggctgg accttgccctc gcattgtgct tgcctggcagg gaataccttg gcaagcagyt      60
ccagtcggag cagcccraga ccgtgcgcgc ccgaagctaa gcctgcctct ggccctcccc      120
tcggcctcaa tgcagaacca gtatgaggag cactgtgttt agagttaaga gtgaacactg      180
tttgatttta cttgggaatt tcctctgtta tatagctttt cccaatgcta atttccauac      240
aacaacaaca aaataacatg tttgcctgtt aagttgtata aaagtagggt attctgtatt      300
taaagaaaat attactgtta catatactgc ttgcaatttc tgtattttatt gktncsttgg      360
aaataaatat agttatfaaa ggttgtcant cc                                           392

```

```

<210> 195
<211> 502
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(502)
<223> n - A,T,C or G

```

```

<400> 195
ccattkgagg ggtkaggkyc cagttycga gtggaagaaa caggccagga gaaqtgcctg      60
ccgagctgag gcagatgttc ccacagtga cccagagccc slgggstatg gtytctgacc      120
ccctncaagg aaagaccacs ttctggggac atgggctgga gggcaggacc tagaggcacc      180
aagggaaggg ccattccgg ggstgttcc cggaggagaa ggggaagggc tctgtgtgcc      240
ccccagagg aagaggccct gagtccctgg atcagacacc ccttcacgtg tatccccaca      300
caaatgcaag ctacccaagg tccccctctc gtcccccttc atacaccctg amcggccact      360
gacscacacc caccagagac acgcccaccc ccattggggar tgtgctcaag gartcgcnng      420
gcarcgtgga catctngtcc cagaaagggg cagaatctcc aatagangga ctgarcmtt      480
gctnnanana aaaaaanana aa                                           502

```

```

<210> 196
<211> 665
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(665)
<223> n - A,T,C or G

```

```

<400> 196
ggttaacttg ttctattgac accacttagt ggatgtcaLL tagaaccatt Ltgtctgtct      60
cctctggaag ccttgccgag agcggacttt gtaactgttg gagaataact gctgaatttt      120
wagctgtttk gagttgatts gcaccactgc acccacaact tcaatatgaa aacyawttga      180
actwatttat tatcttgtga aaytataac aatgaaaatt ttgttcatac tgtattkate      240

```

```

aagtatgatg aaaagcaawa gatatatatt cttttattat gttaaattat gattgocatt 300
attaatoggc aaaatgtgga gtgtatgttc ttttcacagt aatatatgcc ttttgtaact 360
toacttgggt attttattgt aaatgarita caaaattctt aatttaagar aatggatgtt 420
watatttatt toattaattt ctttcotkgt ttaogtwaat tttgaaaaga wtgcagatt 480
tcttgacaga aatcgatctt gatgctgtgg aagtatgttg acccaccatc ctatgagttt 540
ttcttagaat gtataaagggt tgtageccat cnaacttcaa agaaaaaat gaccacatac 600
tttgcaatca ggctgaaatg tggcatgctn ttctaattcc aactttataa actagcaaan 660
aagtg 665

```

```

<210> 197
<211> 492
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> {1}...{492}
<223> n = A, T, C or G

```

```

<400> 197
ttttnttllt ttttttttgc aggaaggatt ccattttattg tggatgcatt ttcacaatat 60
atgtttattg gagegatcca ttatcagtg aagatataca gtgtttataa natttttagg 120
aaggcagatt cacagaacat gctngtengc ttgcagtttt acctcgtaaa gatnacagag 180
aattatagtc naaccagtaa acnagggaatt tacttttcaa aagattaaat ccaaactgaa 240
caaaattcta cctgaaact tactccatcc aaatattgga ataanagtca gcagtgatcc 300
attctcttct gaactttaga ttttctagaa aaatatgtaa tagtgatcag gaagagctct 360
tgttcaaaag tacaacnaag caatgttccc ttaccatagg cottaattca aactttgatc 420
catttcactc ccatacaggg agtcaatgct acctgggaca ctigtatitt gttoatnctg 480
ancntggctt aa 492

```

```

<210> 198
<211> 478
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> {1}...{478}
<223> n = A, T, C or G

```

```

<400> 198
tttnttttgn atttcantct gtannaanta ttttcattat gtttattana aaatatnaa 60
tgtntocacn acaaatcatn ttacntnagt aagaggccan ctacattgta caacatacac 120
tgagtatatt ttgaaaagga caagttttaa gtanaacncat attgccganc atancacatt 180
tatacatggc ttgatgtata tttagcacag canaaactga gtgagttacc agaaanaaal 240
natatatgtc aatcngattt aagatccaaa acagatccta lggtaucatan catentqlag 300
gagttgtggc lltatgttta ctgaaagtca atgcagttcc tgtacaaaga galggcogta 360
agcattotag tacctctact ccattggtta gaatcgtaaa cttatgttta catatgttca 420
gggtcagaat tgtglttaagt nsanttatgg agaggtccan gagaaaaatt tgatncaa 478

```

```

<210> 199
<211> 482
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> {1}...{482}
<223> n = A, T, C or G

```

```

<400> 199
agtgaattgt cctccaaaca aacccttga tcaagtttgt ggcactgaca atcagacctt 60

```

tgetagttcc	tgtcatctat	tcgtactaa	atgcagaactg	gagggggacca	aaaaggggca	120
tcaactccag	ctggattatt	ttggagcctg	caaatctatt	cctacttgta	cggaatttga	180
agtgaattcag	tttctctctac	ggatgagaga	ctgggtcaag	aatatcctca	tgcagcttta	240
tgaagccnac	tctgaacacg	ctggttatct	nagatgagaa	ncagagaaat	aaagtcnaga	300
aaatttacct	ggangaaaag	aggttttngg	ctggggacca	tcccattgaa	ccttctctta	360
anggaattta	agaanaaaact	accacatgtn	tgtngtatcc	tggtgccngg	ccgtttantg	420
ascntngacn	ncacccttnt	ggaatanant	cttgacngcn	tcttgaactt	gctcctctgc	480
ga						482

&lt;210&gt; 200

&lt;211&gt; 270

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(270)

&lt;223&gt; n = A, T, C or G

&lt;400&gt; 200

cgcccgcaag	tgcactcca	gtcggggccg	tccggacgaa	gattctgcca	gcagttgggc	60
cgactgcgac	gacggcgggg	gcgacagtcg	cagggtgcagc	gcggggcgct	gggggtcttg	120
agggctgggc	tgacgcggca	gaggctcgtgt	cagctccca	gaccttgacg	ccgtcgggga	180
cagccgggac	agagcccggt	gaagtcggga	ggcctcgggg	agccctccgg	gaagggcggg	240
cagagagata	cgcaggtgca	ggtggccgcc				270

&lt;210&gt; 201

&lt;211&gt; 419

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(419)

&lt;223&gt; n = A, T, C or G

&lt;400&gt; 201

tttttttttt	ttttggaatc	tactgcgagc	acagcaggic	agcaacaaat	ttatttttga	60
gctagcaagg	taacagggtta	gggcatgggt	acatgttcag	gtcaacttcc	tttgcgaggg	120
ttgattgggt	tgtctttatg	ggggcggggt	gggttagggg	aaancgaagc	anaantaa	180
tggagtgggt	gcacccctcc	tgtagaacct	ggttacnaaa	gcttggggca	gttcacctgg	240
tctgtgacog	tcattttctt	gacatcaatg	ttattagaag	tcaggatata	ttttagagag	300
tccactgtnt	ctggaggag	attagggttt	cttgccaana	tccaancaa	atccactga	360
aaaagttgga	tgatncangt	acngaatacc	ganggcatan	ttctcatant	cggtggcca	419

&lt;210&gt; 202

&lt;211&gt; 509

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(509)

&lt;223&gt; n = A, T, C or G

&lt;400&gt; 202

tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	60
tggcacttaa	tccattttta	tttcaaaatg	tctacaant	tttaetnenc	cattatacng	120
gttatcttnc	aaaatctaaa	ntttattcaa	atntnagcca	aantctttaa	ncaaatnna	180
tacnncnaaa	aatcaaaaaa	atactntct	ttcagcaaac	ttngttacat	aaettaaaaa	240
aatatatacg	gtcgtgtgtt	tcaaagtaca	attatcttaa	cactgcaaac	atnttttnaa	300
ggaactaaaa	taaaaaaaa	cactnccgca	aaggttaaag	ggaacaacaa	attentttta	360



```

caacancnnc nattataaaa atcatatctc aaatcttagg ggaatatata cttcacacng 420
ggatcttaac ttttactnca ctttctttat ttttttanaa ccattgtntt gggcccaaca 480
caatggaat nccnccnnc tggactagt 509

```

```

<210> 203
<211> 583
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(583)
<223> n = A,T,C or G

```

```

<400> 203
tttttttttt ttttttttga cccccctott ataaaaaaca agttaccatt ttatttttact 60
tacacatatt ttttttataa ttggtattag atattcaaaa ggcagctttt aaaatcaaac 120
taaattggaas ctgccttaga tacataattc tttaggaatta gottaaaaac tgcctaaagt 180
gaaaatcttc tctagctctt ttgactgtaa atctttgaat ctgttaaaac atccaaatto 240
atttttcttg tctttaaaat tatctaactt ttccattttt cccctattcc aagtcatttt 300
gtttctctag cctcatttcc tagctcttat ctactattag taagtgggtt ttttcctaaa 360
agggaaaaca ggaagagana atggcacaca aaacaaacat tttatatcca tatttctacc 420
taogttaata aatagcatt ttgtgaagcc agctcaaaag aaggcttaga tctttttatg 480
tccatttttag tcaactaaag atatcnaaag tgcagaatg caaaaaggtt gtgaacattt 540
attcaaaagc taatataaga tatttcacat ctcaacttt ctg 583

```

```

<210> 204
<211> 589
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(589)
<223> n = A,T,C or G

```

```

<400> 204
tttttttttt tttttttttt ttttttctc ttcttttttt ttganaatga ggaatcgaatt 60
tttcaactct tagatagggc atgaagaaaa clcactcttc cagcttctaa akaacaaaca 120
aatctcttat ccttatatcat atlttaaglt aaactaatga gtcactggct tatcttctcc 180
tgaaggaaat ctgttcaatc ttctcattca tatagtlata tcaagtacta ccttgcatat 240
tgaagagllt tlctctctca tttaacacata tatttccatg tgaatttgta tcaaaccttt 300
atlttcaatgc aaactgaaga ataagtntt cttttgcata agagaagaga acaatatnag 360
catttcaaaa ctgtcnaat tgtttgttaa gnttatccat tataattagt tnggcaggag 420
ctaatacaaa tcacatttac ngacnagcaa taataaaact gaagtaccag ttaaatatcc 480
aaaataatta aaggaacatt tttagcctgg gtataattag ctaattcact ttacaagcat 540
ttattnagaa tgaattcaca tgttattatt cntagacca acacaatgg 589

```

```

<210> 205
<211> 545
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(545)
<223> n = A,T,C or G

```

```

<400> 205
tttttttttt ttttttcaat aataatcaaa acaatatcta tttttatatt taaaatllcat 60
agaaaagtgc ctacatttc ataaaagttt gttcttcaaa gtgatcagag gaattageta 120
tngtcttcaa ccccaatttt aatttgagga aatatacca aatatatta agtaattat 180

```

taaagatcat agagcttcta agtgaaaaga taaaatttga cctcagaaa cctgagcatt	240
aaaaatccac tattagcaaa taaattacta tggacttctt gcttttattt tctgatgaat	300
atgggggtgtc actggtaaac caacacattc tgaaggctac attacttagt gatagattct	360
tatgtacttt gctanatac gtggatatga gttgacaagt ttctctttct tcastctttt	420
aagggggcnga ngaaatgagg aagaaaaaga aaggcttaag catactgttc ttctatnng	480
aaggattaga tatgtttctt ttgccaatct taaaaaala ataagtgtta ctactagtga	540
aaccc	545

&lt;210&gt; 206

&lt;211&gt; 487

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc feature

&lt;222&gt; (1)...(487)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 206

tttttttttt ttttttagtc aagtttctna tttttattat aattaaagtc ttggtcattt	60
catttatttag ctctgcaact tacatatcta aattaaagaa acgttnttag acaactgtna	120
caatttataa atgtaagggt ccattattga gtanatatat tcttccaaag gtggatgtgt	180
cccttctccc accaactaat gaancagcaa cattagttta attttatttag tagalnatac	240
actgtctgcaa acgttaattc tcttctccat ccccatgtng atattglgtc latgtgtgag	300
ttggtnagaa tgcatacanca atctnacaat caacagcaag algaagctag gontgggctc	360
tgggtgaaaa tagactgtgt ctgtctgaat caaatgtctt gacctatctt cgggtggcaag	420
aactcttcga accgttctct caaaggcngc tgcacacttt gggcctctn ttgcacttgt	480
ttcaaaa	487

&lt;210&gt; 207

&lt;211&gt; 332

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc feature

&lt;222&gt; (1)...(332)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 207

tgaattggct aagagactgc atttttanaa ctagecaactc ttatttcttt cctttaaaaa	60
tacatagcat taatcccaa atctctttta sagactgac agcttgagaa ggtcactact	120
gcatttatag gacctcttgg tggttctgct gttacntttg aantctgaca atccttgana	180
atcttctcat gcagggagg taaaagggtat tggattttca cagagggaana acacagcgca	240
gaaatgaagg ggccaggctt actgagcttg tccactggag ggctcatggg tgggacatgg	300
aaaagaaggc agcctaggcc ctggggagcc ca	332

&lt;210&gt; 208

&lt;211&gt; 524

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc feature

&lt;222&gt; (1)...(524)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 208

agggcgtggt ggggaggagg ttactqlttt gtctnagtaa caataaatat aaaaagactg	60
gttgtgttcc gggcccatcc aaccacgaag ttgatttctc ttgtgtgcag agtgactgat	120
tttaaggagc atggagcttg tcacaatgtc acaatgtcac agtgtgaagg gcacactcac	180
tcccgclqa ttacacttta gcaacaaaca atagctcatg agtccatact tgtaaatact	240

tttggcagaa	tacttnttga	aacttgacaga	tgataactaa	gatccaagat	atttcccaaa	300
gtaaatagaa	gtgggtcata	atattaatta	cctgttcaca	tcagcttcca	tttacaagtc	360
atgagcccaag	acactgacat	caaaactaagc	ccacttagac	tcctcaccac	cagtctgtcc	420
tgtcatcaga	caggaggtg	tcaccttgac	caaattotca	ccagtcacac	atctatccaa	480
aaaccattac	ctgatccact	tccggtaatg	caccacottg	giga		524

<210> 209  
 <211> 159  
 <212> DNA  
 <213> Homo sapien

<400> 209		
gggtgaggaa	atccagagtt gccatggaga aaattccagt gtcagcattc ttgtccttg	60
tggcctctc	ctacactctg gccagagata ccacagtcaa acctggagcc aaaaaggaca	120
caasggactc	tcgacccaaa ctgcccaga ccctctcca	159

<210> 210  
 <211> 256  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature  
 <222> (1)...(256)  
 <223> n = A,T,C or G

<400> 210		
actccctggc	agacaaaagg agaggagaga gctctgttag lletgigtg ttgaactgcc	60
actgaatllc	tttccacttg gactattaca tgccanttga gggactaatg gaaaaacgta	120
tggggagall	ttanccaatl tangtntgta aatggggaga ctggggcagg cgggagagel	180
ttgcagggtg	naaatgggan ggctgggttg ttanatgaac agggacatag gaggtaggca	240
ccaggatgct	aatca	256

<210> 211  
 <211> 264  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature  
 <222> (1)...(264)  
 <223> n = A,T,C or G

<400> 211		
acattgtttt	tttgagataa agcattgaga gagctctcct taacgtgeca caatggagag	60
actggaacac	ataccacat ctttgttctg agggataatt ttctgatana gtcttctgt	120
atattcaagc	acatatgtta tatattattc agttccatgt ttatagocca gttasggaga	180
ggggagatac	attcngaaag aggaactgaa gaaatactca agtnggaaaa cagaaaaaga	240
aaaaaaggag	caaatggaga gcct	264

<210> 212  
 <211> 328  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature  
 <222> (1)...(328)  
 <223> n = A,T,C or G

<400> 212		
acccaaaaat	craatgctga atatttggct tcattattcc caattcttt gattglcaaa	60

ggatttaattg	ttgtctcagc	ttgggcactt	cagttaggac	ctaaggatgc	cagccggcag	120
gtttatatat	gcagcaacaa	tattcaagcg	cgacaacagg	ttattgaact	tgcccgccag	180
ttnaatttca	ttcccatiga	cttgggatcc	ttatcatcag	ccagagagat	tgaaaattta	240
ccctacnac	ttttactct	ctgganaggg	ccagtgggtg	tagctataag	cttggccaca	300
tttttttttc	ctttattcct	ttgtcaga				328

<210> 213  
 <211> 250  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1) ... (250)  
 <223> n = A, T, C or G

<400> 213	
acttatgagc	agagcgacat
taaagcattg	ctcactgaag
cattatgcca	aagganatat
ttcaatattt	gcatgaacct
tctcatcggt	
agactgaata	aaactgaatt
gactgccagg	agggaaagta
tctccaaact	tcttctctcat
catgttaana	aacsaatata
	tctctnacct
	60
	120
	180
	240
	250

<210> 214  
 <211> 444  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1) ... (444)  
 <223> n = A, T, C or G

<400> 214	
accagaatc	caatgctgaa
gatttaattg	tgtctcagct
tttatatatg	cagcaacaat
tgaatttcat	tcccatigac
ccctacgact	ctttactctc
ttttttttcc	tttattcctt
agtgaatttt	acaaaattcc
actttgctct	ccctaatata
tatttggett	cattattccc
agttaggacc	taaggatgcc
gacaacaggt	tattgaactt
tatcatcagc	canagagatt
cagtgggtgg	agctataagc
gcgatttcac	catatgctan
gtgaataaaa	ccttaacctat
	agttgccatt
	60
	120
	180
	240
	300
	360
	420
	444

<210> 215  
 <211> 366  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1) ... (366)  
 <223> n = A, T, C or G

<400> 215	
acttatgagc	agagcgacat
taaagcattg	ctcactgaag
cattatgcca	aagganatat
ttcaatattt	gcatgaacct
tctcatcggt	aagcagaggg
tccaagctgt	tttctacact
anactgaata	aaactgaatt
gactgccagg	agggaaagta
tctccaaact	tcttctctcat
catgttgaga	aacaaatata
atggaccata	gogaanaaaa
ttccaaccaa	ggtggaaata
	tctataactt
	60
	120
	180
	240
	300
	360
	366

<210> 216  
 <211> 260  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(260)  
 <223> n = A,T,C or G

<400> 216  
 ctgtataaac agaactccac tgcangaggg agggcgggyc caggagaate tccgcttgc 60  
 caagacaggg gcttaaggag ggtctccaca ctgctnnlea gggctnttnc atttctttat 120  
 taataaaaaag tnnaaaaagg ctcttclcaa cttttttccc ttinggclgga aaatctaaaa 180  
 atcaaaaatt tectnaagtl ntcaagctat catctatacl ntatcctgaa aaagcaacat 240  
 aatctctect tccctccttt 260

<210> 217  
 <211> 262  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(262)  
 <223> n = A,T,C or G

<400> 217  
 aactaagtgg gtaagtttan aaatgttata atttcaggaa naggaaacga tataattgtt 60  
 tcttgcctat aattttctat tttaataagg aattogcnaa ttgggggtgg gggaaagtag 120  
 ggcattctac agtttgagca aaatgcaatt aaatgtggaa ggacagcact gaasaatttt 180  
 atgaataate tgtatgattt tatgtctcta gagtagattt ataattagcc acttaacctt 240  
 atatctttca tgcttgtaaa gt 262

<210> 218  
 <211> 205  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(205)  
 <223> n = A,T,C or G

<400> 218  
 aaccaagtgg tgcattlaccg gaantggatc aaggacacca tcttgcccaa cccctgagca 60  
 cccclatcaa ctcccctttg taglaaactt ggaaccltgg aaatgaccag gccaagactc 120  
 aggcctccc agttctactg acctttgtcc ttangtntna nglccagggt tgcaggaaa 180  
 anaatracag agacacaggt gtaaa 205

<210> 219  
 <211> 114  
 <212> DNA  
 <213> Homo sapien

<400> 219  
 tactgttttg tctcagtaac aataaatata aaaagactgg ttgtgttccg gcccacatca 60  
 accacgaagt tgatttctct tgtgtgcaga gtgactgatt ttaaaggaca tggg 114

<210> 220  
 <211> 93  
 <212> DNA

<213> Homo sapien

<400> 220

actagccagc acaaaaggca gggtagcctg aattgcttcc tgcctcttac atttcttcta  
aaataagcat ttagtgctca gtccctactg agt

60  
93

<210> 221

<211> 167

<212> DNA

<213> Homo sapien

<220>

<221> misc\_feature

<222> (1)...(167)

<223> n = A,T,C or G

<400> 221

actangtgca ggtgcgcaca aatatttctc gatattccct tcatcttcca ttocatgagg  
tcttttggcc agcctgtggc tctactgtag taagtctctg ctgatgagga gccagnatgc  
ccccactac ctccctgac gctcccana aatcaccaa cctctgt

60  
120  
167

<210> 222

<211> 351

<212> DNA

<213> Homo sapien

<400> 222

agggcgtggt ggggagggcg gtactgacct cattagtagg agaatgcatt ctggcaccoc  
gttcttcacc tgtcccccaa tcttataaaq gccatactgc ataaagtcac caccagatca  
atgtttgttg aattaaagga tggatgaaaa aaattatcaa tgaalltttg cataatccaa  
ttttctcttt tatatttcta gaagaagttt ctttgagcct attagatccc ggaatcttt  
taggtgagca tgattagaga gctttagagt tgcctttaca tatactctgc atatttgagt  
ctcgtatcaa aacaatagat tggtaaaggt ggtattattg tattgataag t

60  
120  
180  
240  
300  
351

<210> 223

<211> 383

<212> DNA

<213> Homo sapien

<220>

<221> misc\_feature

<222> (1)...(383)

<223> n = A,T,C or G

<400> 223

aaaacaaac aaacaaaaaa acaattcttc attcagaaaa attatcttag ggactgatat  
tggtaallat ggtcaattta atwrtttkt ggggcatttc cttacattgt ctgacaaga  
ttaaatgtc tgtgcaaaa ttttgtattt tatttgaga cttcttatca aaagtaatgc  
tgccaaagga agtctaagga attagtagtg ttccmctcac ttgtttggag tgtctatcc  
taaaagattt tgatttcttg gaatgacaat tataatttaa ctttgggtgg ggaaanagtt  
ataggaccac agtcttcaat totgatactt gtaaatatatt cttttattgc acttgttttg  
eccattaago tatatgttta aaa

60  
120  
180  
240  
300  
360  
383

<210> 224

<211> 320

<212> DNA

<213> Homo sapi n

<400> 224

ccctgaagg cttcttggtt gaaatagta cagttacaa cantaggaac acaaaaaaga  
aaaagtftgt gacattgtag tagggagtgt gtacccctta ctcacacatca aaaaaaaat  
ggatacatgg ttaaggata raagggcatt atillatcat atgltctaaa agagaaggaa

60  
120  
180

gagaaatatac	tacttttctc	aatggaagc	oottaaaggt	gctttgatac	tgaaggacac	240
aatgtggcc	gtccatctc	ctttaragtt	gcctgacttg	gacacggtaa	ctgttgcaqt	300
tttaractcm	gcattgtgac					320

<210> 225  
 <211> 1214  
 <212> DNA  
 <213> Homo sapien

<400> 225

gaggactgca	gcccgcactc	gcagccctgg	caggcggcac	tggtcattga	aaacgaattg	60
ttctgctcgg	gcgtccctgg	gcctccgcag	tgggtgctgt	cagccgcaca	ctgtttccag	120
aactcctaca	ccatcgggct	ggcctgcaac	agtcttgagg	ccgaaccaaga	gccaggggagc	180
cagatgggtg	agcccgagct	ctccgtacgg	cacccagagt	acaacagacc	cttgctcgtc	240
aacgacctca	tgctcatcaa	gttggacgaa	tccgtgtccg	agtctgacac	catccgggagc	300
atcagcattg	cttcgcagtg	ccctaccggc	gggaactctt	gcctcgtttc	tggctggggg	360
ctgctggcga	acggcagaat	gcctaccgtg	ctgcagtgcg	tgaacgtgtc	gggtgggtgtc	420
gaggaggtct	gcagtaagct	ctatgacccg	ctgtaccacc	ccagcatgtt	ctgcccgggc	480
ggaggggcaag	accagaagga	ctcctgcaac	ggtgactctg	ggggggccct	gatctgcaac	540
gggtacttgc	agggccttgc	gtctctcgga	aaagccctgt	gtggccaagt	tggcgtgcca	600
ggtgtctaca	ccaacctctg	caaatctcat	gagtggatag	agaaaaccgt	ccaggccagt	660
taactctggg	gactgggaac	ccatgaaatt	gacccccaaa	tacatcctgc	ggaagggaatt	720
caggaatafc	tgttcccagc	ccctcctccc	tcaggcccag	gagtcagggc	ccccagcccc	780
tcctccctca	aaaccaagggt	acagatcccc	agccctcctc	ccctcagacc	caggagtcca	840
gacccccag	ccctcctccc	ctcagaccca	ggagtccagc	ccctcctccc	tcagacccag	900
gagtcagac	ccccagccc	ctcctcctcc	agaccccagg	gtccaggccc	ccaaacccctc	960
ctcctcaga	ctcagaggtc	caagccccca	acccctcctt	ccccagaccc	agagggtccag	1020
gtcccaagcc	ctcctcctcc	agacccagcg	gtccaatgac	acctagactc	tcctctgaca	1080
cagtgcctcc	ttgtggcaag	ltagacccac	cttaccagtt	ggtttttcat	tttttggtccc	1140
tttccctcag	alccagaaat	aaagtctaa	agaagcgcaa	aaaaaasaaa	aaaaaaaaaa	1200
aaaaaaaaaa	aaaa					1214

<210> 226  
 <211> 119  
 <212> DNA  
 <213> Homo sapien

<400> 226

accuagctatg	tgcaggqaga	cggaaccccc	tgtgacagcc	cactccacca	gggttcccaa	60
agaaacclggc	ccagtcataa	tcaatcctcc	tgacagtgcc	aataatcaag	ataaccagt	119

<210> 227  
 <211> 818  
 <212> DNA  
 <213> Homo sapien

<400> 227

acaattcata	gggacgacca	atgaggacag	ggaatgaacc	cggtctctcc	ccagccctga	60
tttttgctac	atatggggtc	ctttttcatt	ctttgcacaa	acactgggtt	ttctgagAAC	120
acggacgggt	cttagcacaa	tttgtgaaat	ctgtgtarac	ccgggctttg	caggggagat	180
aattttcctc	ctctggagga	aaggtgggtg	ttgacaggca	gggagacagt	gacaaggcta	240
gagaaagcca	cgctcggcct	tctctgaacc	aggatggAAC	ggcagacccc	tgaanaagaa	300
gcttgtcccc	ttccaatcag	ccacttctga	gaacccccat	ctaacttccc	actggaaag	360
agggcctcct	caggagcagt	ccaagagttt	tcaagatAAC	cgtgacaact	accatctaga	420
ggaaaggggtg	caccctcagc	agagaaagccg	agagcttaac	tctggtcgtt	tcagagaca	480
acctgctggc	tgtcttgagg	tgcgcccagc	ctttgagagg	ccactacccc	atgaacttct	540
gccatccact	ggacatgaag	ctgagAAC	tggccttcac	cactgaqltg	tcattgagagg	600
gacaggctct	qccctcaagc	cggclgagg	cagcaacac	tctcctcccc	lctctcagcc	660
aaagcuatlc	cccaaaatcc	agacntacc	atgaagAAC	gagacccccaa	cagtillygt	720
caagagqala	tgaaggactgt	ctcagcctgg	ctttgggctg	acaccatgca	ccccacaaag	780
gtccacttct	aggttttcag	cctagatggg	agtcgtgt			818

<210> 228  
 <211> 744  
 <212> DNA  
 <213> Homo sapien

<400> 228

actggagaca ctgttgaact tgaatcaagac ccagaccacc ccaggtctcc ttctgtggat	60
gtcatgaagt ttgacatacc ttgggaacga gctcctcctc tggagatgg aagaccgtgt	120
tcgtggcoga cctggcctct cctggcctgt ttcttaagat gggagtcac attcaatgg	180
taggaaaagt ggcttcgtaa aatagaagag cagtcactgt ggaactacca aatggcgaga	240
tgtctgggtgc acattgggtt gctttgggat aaaagattta tgagccaact attctctggc	300
accagattct aggcacgttt gttccactga agcttttccc acagcagtc accctotgcag	360
gctggcagct gaatggcttg ccggtggctc tgtggcaaga tcacactgag atcgtgagt	420
gagaaggcta ggaatgcttg ctagtgtct tagctgtcac gttggctcct tccaggttg	480
ccagacgggt ttggccactc cctcttaaaa cacaggcgcc ctctgggtga cagtgaaccg	540
ccgtggctat ccttggccca ttccagcagt cccagttatg catttcaagt ttggggcttg	600
ttcttttctg taatgttct ctgtgllgt agctgtcttc alllcctggg ctaagcagca	660
ttgggagatg tggccagag atccactct taagaccag tggcgaaaga cactttctt	720
cttcaactct aagtagctgg tgggt	744

<210> 229  
 <211> 300  
 <212> DNA  
 <213> Homo sapien

<400> 229

cgagtctggg ttgtgtat aaagtttgat cctcctttt ctcatccaaa tcatgtgaac	60
cattacacat cgaataaaaa gaaaggtggc agacttgcac aacggcagga tgacatgtgc	120
tgcaggggtg ttgttttta attattatg ttagaaacgt caccacagt cctgttcat	180
ttgtatgtga cagccaaactc tgagaaggtc ctatttttcc cctgcagag gctccagct	240
cactaggtc ctcttggccc tcacactyga gtctccgcca gtgtgggtgc ccactgarat	300

<210> 230  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 230

cagcagaaca aatacaata tgaagagtgc aaagatctca taaaatctat gctgaggaat	60
gagcgacagt tcaaggagga gaagcttgca gagcagctca agcaagctga ggagctcagg	120
caatataaag tctgtgttca cactcaggaa cgagagctga cccagttaag ggagaagttg	180
cggaaggga gagatgcctc cctctcattg aatgagcctc tccaggccct cctcaactcg	240
gatgaaccgg acagtcacca ggggcaggac ctccaagaaa cagacctcgg ccgcgaccac	300
g	301

<210> 231  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 231

qcaagcacgc tggcaaatct clqtcaggtc agctccagag aagccattag tcatttttagc	60
caggaaactc aagtcacat ccttggcaac tggggacttg cgcaggtag ccttgaggat	120
qgcacacagg gacttctcat caggaagtgg gatgtagatg agctgatcaa gacggccagg	180
tctgaggatg gcaggatcaa tgatgtcagg ccggttggta ccgccaatga tgaacacatt	240
tttttttggt gacatgccat ccatttctgt caggatctgg ttgatgactc ggtcagcage	300
c	301

<210> 232  
 <211> 301  
 <212> DNA  
 <213> Homo sapien



&lt;400&gt; 232

agtaggtact	tcgtgagaag	ttcaacacca	aaactggaac	atagttctcc	ttcaagtgtt	60
ggcgacagcg	gggcttctgt	attctggaat	ataactttgt	gtaaattaac	agccacctat	120
agaagagtcc	atctgtctgt	aaggagagac	agagaactct	gggttcctgc	gtcctgtcca	180
cgtgtctgtac	caagtgtctg	tgccagcctg	ttacctgttc	tcactgaaaa	tctggctaata	240
gctcttgtgt	atcaattctg	attctgacaa	tcaatcaatc	aatggcctag	agcaatgact	300
g						301

&lt;210&gt; 233

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 233

atgaotgact	tcacagtaag	gctctctaaq	gggttaagtaq	gaggatccac	aggatttgag	60
atgctaaggg	cccagagatc	gtttgatcca	acctctctat	tttcagaggg	gaaaatgggg	120
notagaagtt	acagagcacc	tagctgggtg	gctggcacc	ctggcctcac	acagactccc	180
gagtagctgg	gactacaggg	acacagtcac	tgaagcaggg	cctgttagca	attctatgag	240
tacaaattaa	catgagatga	gtagagactt	tattgagaaa	gcaagagaaa	atcctatcaa	300
c						301

&lt;210&gt; 234

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 234

aggctctaca	catcgagact	catccatgat	tgatatgaat	ttaaaaatta	caagcaanga	60
cattttatte	atcagatgc	ttctctctct	ttctctctct	cgctctctct	ctctctctct	120
tcctctctca	caacatactt	ctcaallctt	tcaggettta	aatctctgag	ggattgatct	180
ngctcatga	cagcaagttc	aattgttttg	ccactgact	gaaccacttc	caggagtgcc	240
ttgatcacca	gcttaatggt	cagatcatct	gcttcaatgg	cttctgctagt	atagttcttc	300
t						301

&lt;210&gt; 235

&lt;211&gt; 283

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 235

tggggctgtg	catcaggcgg	gtttgagaaa	tattcaattc	tcagcagaag	ccagaatttg	60
aattccctca	tcttttaggg	aatcatttac	cagggtttgg	gaggattcag	acagctcagg	120
tgttttcaat	aattgtctct	aacttctgtc	cctctttgtt	catggatagt	ccataaata	180
atgttatctt	tgaaclgatg	ctcataggag	agaatataag	aaclctgagt	gatatcaaca	240
ttaggggatto	aaagaaatat	caatcttaag	ctcacactgg	tca		283

&lt;210&gt; 236

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 236

aggctctcca	ccaactgctt	gaagcacggg	taaaattggg	aagaagtata	gtgcagcata	60
aactctttta	aatcgatcag	attcccttaa	cccacatgca	atcttcttca	ccagaagagg	120
tgggagcagc	atcattaata	ccaagcagaa	tgggtaatat	ataaatacaa	tggatataag	180
tgggtagacg	gtttcatgag	tacagtgtac	tgtggtatcg	taatctggac	ttgggttgta	240
aagcatcgtg	taccagtcat	aaagcatcaa	tactcgacat	gaacgaatat	aaagaacacc	300
a						301

&lt;210&gt; 237

&lt;211&gt; 301

<212> DNA  
<213> Homo sapien

<400> 237  
cagtggtagt ggtgggtggac gtggcggttg tctgtgtgccc ttttttggtg ccggtcaca 60  
actcaatttt tgttgcctcc tttttggcct ttcccaattt gtccatctca attttctggg 120  
ccttggctaa tgcctcatag taggagtcct cagaccagcc atggggatca aacatatcct 180  
ttgggtagt ggtgccnagc tctcaaatgg cccagaatgg atcagcttct cgtaaatcta 240  
gggttcgaa attctttctt cctttggata atgtagtcca tatccattcc ctcttttate 300  
t 301

<210> 238  
<211> 301  
<212> DNA  
<213> Homo sapien

<400> 238  
gggcagggttt tttttttttt ttttttgatg gtgcagaccc ttgttttatt tgtctgactt 60  
gttcacagtt cagcccccctg ctcagaaaaac caacggggcca gctaaggaga ggaggaggca 120  
ccttgagact tccggagtcg aggetctcca gggttcccca gcccatcaat cattttctgc 180  
accccctgcc tgggaagcag ctccctgggg ggtgggaatg ggtgactaga agggatttca 240  
gtgtgggacc cagggtctgt tcttcacagt aggaggtgga agggatgact aatttcttta 300  
t 301

<210> 239  
<211> 239  
<212> DNA  
<213> Homo sapien

<400> 239  
alaagcagct agggaaattt ttatttagta atgtcctaac ataaaagtgc acstaactgc 60  
ttctgtcaca ccagtactct gacttttctg acaacccaga aataactaag agaaggcaaa 120  
cataatacct tagagatcaa gaacattta cacagttcaa ctgtttaaaa atagctcaac 180  
attcagccag tgagttaggt gtgaatgccg gcatacacag tatacaggtc cttcagga 239

<210> 240  
<211> 300  
<212> DNA  
<213> Homo sapien

<400> 240  
ggtcctaatt ggcagcagc ttccacattt taacgcaggt ttaagggtgat actgtccttt 60  
gggatctgcc ctcagtgga accttttaag gaagaagtgg gcccaageta agttccacat 120  
gctgggtgag ccagatgaat tctgttccct ggtcacttct ttcactgggg cgaalqggg 180  
ctgccaggtt tttaaaatca tcttccatct tgaagcacac ggtcaattca ccttctctac 240  
gctgtlqggg tactttgatg aaataccca ctttgttggc ctttctgaag ctataatgtc 300

<210> 241  
<211> 301  
<212> DNA  
<213> Homo sapien

<400> 241  
gaggtctggt gctgaggtct ctgggctagg aagaggagtt ctgtggagct ggaagccaga 60  
cctcttttga ggaactcca gcagctatgt tgggtgtctt gaggaatgc aacaaggctg 120  
ctcctccatg tattgaaaa ctgcaaaactg gactcaactg gaaggagtg ctgtctccag 180  
tgtgaagaac cagcctgagg tgacagaaac ggaagcaaac aggaacagcc agtcttttct 240  
tctctctct gtcatacggg ctctctcaag catcctttgt tgtcaggggc ctaaaaggga 300  
g 301

<210> 242  
<211> 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 242

ccgaggctcct gggatgcaac caatcaactct gtttcacgtg acatttatca ccatacaatt	60
tgtggcatttt cctcattttc tacattgtag aatcaagagt gtaaataaat gtatatcgat	120
gtcttcaaga atatatcatt cctttttcac tagaaccat tcaaatata agtcaagaat	180
cttaatatca acaaatatat caagcaact ggaaggcaga ataactacca taatttagta	240
taagtaocca aagttttata aatcaaaagc cctaatgata accattttta gaattcaatc	300

a

&lt;210&gt; 243

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 243

aggtaagtc cagtttgaag ctcaaaagat ctggatagag cataggctca tggacgacat	60
ggtggcccaa gctatgaat cagaggagg cttcatctgg gcctgtaaa actatgatgg	120
tgacgtgacg tggacictg lggcccaagg gtatggctct ctggcctga tggcagcgt	180
qctggtttgg ccagatggc agcagtaga agcagaggct gccacggga ctgtaacccg	240
tcactaccgc atgttcaga aaggacagga gacgtccacc aatcccatg ctccatttt	300

r

&lt;210&gt; 244

&lt;211&gt; 300

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 244

gtgtgtttgc aagatgaa lgaatgatto tcaagctagg acttaacott gaaatggaaa	60
gtcatgaa ccaatttgc aagatctgtc gtacacatgc ctctgtagag agcagcattc	120
ccagggaac tggaaacagt tgacacatga aggtgcttgc tcccaagac acatcctaaa	180
aggtgtttga atgttgaaaa cgtcttctct ctttattgoc ctttcttatt tatgtgaaca	240
actgtttgic ttttgtgtat ctttttttaa ctgtaaagtt caattglaaa aatgaatc	300

&lt;210&gt; 245

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 245

gtctgagtat ttaaatgtt attgaaatta tcccaacca atgttagaaa agaaagaggt	60
tatatactta gataaaaaat gaggtgaatt actatccatt gaaatcatgc tottagaatt	120
aaggccagga gatattgtca ttaattgtara cttcaggaca cttagagtata gcagccctat	180
gttttcaaa agcagagatg caattaaata ttgttttagca tcaaaaagga cactcaatac	240
agctaataaa atgaagaacc taatttctaa agcaattctt tataatttac aaagttttta	300

g

&lt;210&gt; 246

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 246

ggtctgtcct acaatgcctg cttcttgaaa gaagtcggca cttcttagaa tagctaaata	60
acctgggctt attttaaaga actatttgta gctcagattg gttttcttat ggcLaaata	120
agtgtctctt gtgaaaatta aataaaacag ttaattcaaa gccttgatat atgttaccac	180
taacaatcat actaaatata ttttgaagta caaagtttga catgctctaa agtgacaacc	240
caaatgtgtc ttacaaaaca cgttcctaac aaggtatgct ttacactacc aatgcagaaa	300

c

78

<210> 247  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 247  
 aggtcctttg gcagggtcca tggatcagag ctcaacttgg agggaaaggc atttcgggta 60  
 gcttgaagg ggcactggcg gcagucacac caaggaaggc aagggtgttt cccccacgct 120  
 gtgtcctgtg ttcagggtcg ccacacacac ctcatgggaa caggatcacc catgcgctgc 180  
 ccttgatgat caaggttggg gcttaagtggt attaaggag gcaagttctg ggttccttgc 240  
 cttttcaaac catgaagtcg ggcctctgat cctcctttt cctaactgat attctaacta 300  
 a 301

<210> 248  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 248  
 aggtccttgg agatgccatt tcagccgaag gactcttctw ttcgggaagla cccctcact 60  
 attaggaaga ttcttagggg taatttttct gaggaaggag aactagccaa ctttaagaatt 120  
 acaggaagaa agtggttttg aagacagcca aagaaataaa agcagattaa attgtatcag 180  
 gtacattcca gctgtttggc aactccataa aaacatttca gattttaato cccaatttag 240  
 ctaatgagac tggatttttg ttttttatgt tgtgtgtcgc agagcctaaa actcagttcc 300  
 c 301

<210> 249  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 249  
 gtccagagga agcaccttgt gctgaactag gcttgccctg ctgtgaactt gcaattggag 60  
 ccttgacgct gctgtttctc ccgaaaaaac cgaccgacct ccgagatctc cgtcccgccc 120  
 ccaggagagc acagcagtgta ctacagagctg gtccgacact gtgctccctt cctcaccgcc 180  
 catcgtaatg aattattttg aaaattaatt ccaccatcct ttcagattct ggaatgganag 240  
 actgaatctt tgactcagaa ttgtttgctg aaaagaatga tgtgacttte ttagtcattt 300  
 a 301

<210> 250  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 250  
 ggtctgtgac aaggacttgc aggtctgtggg aggcgaagla cacttaacac tacacttctc 60  
 cttatcttta ttggtttgat aaacataatt atttctaaca ctgcttatt tccagttgco 120  
 cataagcaca tcagtacttt tctctggctg gaatagtasa cttaagtatg gtacatctac 180  
 ctaaaagact actatgtgga ataatacata ctaatgaagt atlacatgat ttaagacta 240  
 caataaaaac aaacatgctt ataacattaa gaaaaacaat aaagctacct gattgaaccc 300  
 a 301

<210> 251  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 251  
 gccagaggtcc tacatttggc ccagtttccc cctgcactct ctccagggcc cctgcccact 60  
 aqcaaacctc atagagcata ggaagactgg ttgcccctgg ggcaggggga ctgtctggat 120  
 ggcaggggtc ctcaaaatg ccactgtcac tgcagggaaa tgcttctgag cagtacacct 180  
 ccttgggalc aatgaaaagc ttcagaaat cttcaggctc actctcttga aggcccgga 240

cctctggagg ggggcagtg aatcccagct ccaggacgga tcctgtcgaa aagatatcct 300  
c 301

<210> 252  
<211> 301  
<212> DNA  
<213> Homo sapien

<400> 252  
gcaaccnate actctgtttc acgtgacttt tateaccata caatttgttg catttctca 60  
ttttctacat tgtagaatca agagtgtana taaatgtata tcatgtcttt caagaaatata 120  
tcatttcttt ttcactagga acccattcaa aatetaagtc aagaatctta atatcaacaa 180  
atatatcaag caaactggaa ggcagatata claccataat ttgtatataag taccuaaagt 240  
tttataaate aaaagcccta algataacca tttttagaat tcaatcatca ctgtagaate 300  
a 301

<210> 253  
<211> 301  
<212> DNA  
<213> Homo sapien

<400> 253  
ttccctaaga agatgttatt ttgttgggtt ttgttccccc tccatctcga ttctgtacc 60  
caactaaaaa aaaaaataa agaaaaaatg tgcctgcgttc tgaaaaataa ctcccttagct 120  
tggctcgatt gttttcagac cttaaaaataf aaacttgttt cacaagcttt aatccatgtg 180  
gatttttttt cttagagaa cacaanaacat aaaaggagca agtcggactg aatacctgtt 240  
tccatagtgc ccacagggtt ttctctacat tttctccata ggaaaatgct ttttcccaag 300  
g 301

<210> 254  
<211> 301  
<212> DNA  
<213> Homo sapien

<400> 254  
cgctgcgcct ttcccttggt ggagggggcaa ggccagaggg ggtccaagtg cagcacgagg 60  
aacttgacca attcccttga agcgggtggg ttazaccctg taaatgggaa caaaatcccc 120  
ccaaatctct tcatcttacc ctggtggact cctgactgta gaattttttg gttgaaacaa 180  
gaaaaaata aagcttttga cttttcaagg ttgcttaaca ggtactgaaa gactggcctc 240  
acttaaaact agccaggaaa agctgcagat ttattaatgg gtgtgttagt gtgcagtgc 300  
t 301

<210> 255  
<211> 302  
<212> DNA  
<213> Homo sapien

<400> 255  
agcttttttt tttttttttt tttttttttt ttcattaaaa aatagtgtct tttattataa 60  
attactgaaa tgtttctttt ctgaatataa atataatat gtgcaasgtt tgacilggat 120  
tgggattttt ttgagttctt caagcatctc ctaataccct caagggcctg agtagggggg 180  
aggaaaaagg actggaggtg gaatctttat aaaaaacaag agtgatttag gcagattgtg 240  
aacattatta aaaaacaaga aacaaacaaa aaatatagaga aaaaaccac cccaaacac 300  
aa 302

<210> 256  
<211> 301  
<212> DNA  
<213> Homo sapien

<220>  
<221> misc\_feature

&lt;222&gt; {1}...{301}

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 256

```

gttccagaaa acattgaagg tggcttcccc aagtcctaact agggataccc cctctagcct    60
aggaccctcc tccccacacc tcaatccacc aaaccatcca taatgcaccc agataggccc    120
acccccaaaa gacctggacac cttaggcaca cagttatgac caggacugac tcatctctat    180
aggcaaatag ctgctggcaa actggcatta cctggtttgt ggggatgggg gggcaagtgt    240
gtggcctctc ggcctgggta gcaagaacat tcagggtagg cctaagttan tcgtgttagt    300
t                                                                    301

```

&lt;210&gt; 257

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 257

```

gttctggagg aactclggct tgcctattaa gtccactga ttttcaactat cccctgaatt    60
tccccactta ttttctctt tcaactatgc aggccttaga agaggtctac ctgcctccag    120
tcttacctag tccagcttac cccctggagt tagaatggcc atcctgaagt gaaaagtaat    180
gtcacattac tcccttcagt gatttcttgt agaagtgcga atccctgaat gccaccaaga    240
tcttaatctt cacatcttta atcttatctc ttgactcct cttacaccg gagaaggctc    300
c                                                                    301

```

&lt;210&gt; 258

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; {1}...{301}

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 258

```

cagcagtagt agatgccgta tgcagcagc ccagcactc ccaggatcag caccagcacc    60
agggggccag ccaccaggcg cagaagcaag ataaacagta ggctcaagac cagagccacc    120
ccaggggcaa caagaatcca ataccaggac tgggcaaaat cttcaagat cttacactg    180
atgtctcggg cattgaggct gtcaataana cgtgatccc ctgctgtatg gtggtgtcat    240
tggtgatccc tgggagcgcc ggtggagtaa cgttgggtcc tggaaagcag cgcacacac    300
t                                                                    301

```

&lt;210&gt; 259

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; {1}...{301}

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 259

```

tcataatgc aaacaaatgc agactangcc tcaggcagag actaaaggac atctcttggg    60
gtgtcctgaa gtgatttggg cccctgaggg cagacacctc agtaggaac ccagtgggaa    120
gcaaagccat aagggaagccc aggtattcct gtgatcagga agtgggcccag gaaggctctg    180
tcagctcac atctcatctg catgcagcac ggaccggatg cgcaccactg gtcttggctt    240
ccctcccatc ttctcaagca gtgtccttgt tgagccattt gcactccttg ctcagggtgg    300
c                                                                    301

```

&lt;210&gt; 260

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 260

ttttttttt	ccctaaggaa	aanganggaa	caagtctcat	aaaacccaat	aagcattggt	60
aaggtgtctt	aacttgaana	agattaggag	tcactggllt	acaagttata	attgaatgaa	120
agaactgtaa	cagccacagt	tggccatttc	atgccaatgg	cagcaaccaa	caggattcac	180
tagggcaaaa	taantaogtg	tgtggaagcc	ctgataagtg	cttaataaac	agactgattc	240
actgagacat	caqlacctgc	cggggcggcc	gclcgagccg	aattctgcag	atatccatca	300
c						301

&lt;210&gt; 261

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 261

aaatattcga	gcaaatcctg	taactaatgt	gtctccataa	aaggctttga	actcagtga	60
tctgcttcca	tccacgattc	tagcaatgac	ctctcggaca	tcaaagctcc	tcttaagggt	120
agcaccacat	attccataca	attcatcagc	aggaaataaa	ggctcttcag	aaggttcaat	180
ggtgacatcc	aattttcttct	gataatttag	attcctcaca	accttcttag	ttaagtgaag	240
ggcatgatga	tcatacaaa	cccagtggtc	acttaactcca	gactttctgc	aatgaagatc	300
a						301

&lt;210&gt; 262

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 262

gaggagagcc	tgttacagca	tttgtaagca	cagaatactc	caggagtatt	tgtaattgtc	60
tgtgagcttc	ttgccgcaag	tctctcagaa	atttaaaaag	atgcaaatcc	ctgagtcacc	120
cctagacttc	ctaaaccaga	tcctctgggg	ctggaacctg	gcactctgca	tttgtaatga	180
gggctttctg	gtgcacacct	aattttgtgc	atctttgccc	taaactcctg	attagtgcgc	240
catcattacc	ccacatttat	aatgggatag	attcagagca	gatactctcc	agcaaaagat	300
c						301

&lt;210&gt; 263

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; {1}...{301}

&lt;223&gt; n = A, T, C or G

&lt;400&gt; 263

tttagcttgt	ggtaaatgac	tcacaaaaact	gatttttaaaa	tcaagttaat	gtgaattttg	60
aaaattacta	cttaattcta	attcacataa	acaatggcat	taaggttttga	cttgagttgg	120
ttcttagtat	tatttatggt	aaataggctc	ttaccacttg	caaataactg	gccacatcat	180
taatgactga	cttcccagta	aggctctcta	aggggtaagt	angaggatcc	acaggatttg	240
agatgctaag	gccccagaga	tgttttgatc	caacctcttt	attttcagag	gggaaaatgg	300
g						301

&lt;210&gt; 264

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 264

aaagacgtta	aaacactcta	ctaccacttg	tggaaacttc	aaaaggatca	tgacaaaacc	60
------------	------------	------------	------------	------------	------------	----

aatgaatgac tataaaaaca atatttaccat ttaattggtt gtagacaata aaaaaacaag 120  
 gtggatagat ctagaattgt aacattttaa gaaaccata scatttgaca gatgagaaag 180  
 ctcaattata gacgcaagt tataactaa ctactatagt agtaaagaaa tacatttcac 240  
 acccttcata taatttact atcttggtt gaggcactcc atanaatgta taactgtcat 300  
 a 301

&lt;210&gt; 265

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 265

tgcccaagtt atgtgtaagt gtatccgcac ccagaggtaa aactacactg taacttttgt 60  
 ctctctgtga cgcagtattt ctctctctggg gagaagccgg gaagtcttct cctggctctc 120  
 catattcttg gaagtctcta atcaactttt gtccatttgg ttctatttct tcaggaggga 180  
 ttttcagttt gtcaacatgt tctctaacaa caattgccc tttctgtaaa gaatccaaag 240  
 cagtcacaagg ctttgacatg tcaacaacca gcataactag agtatcttc agagatacgg 300  
 c 301

&lt;210&gt; 266

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 266

taccgtctgc ctttctccc atccaggcca tctgogaato tacatgggtc ctctattog 60  
 acaccagatc actcltctct ctaccacag gcttgcctatg agcaagagac acaacctctc 120  
 ctctctcttg lccagcttc tllctctgtt ctccacccc cttaagttct attcctgggg 180  
 atagagacac caatacccat aacctctctc ctaagctctc ttataaccca gggtagacag 240  
 cacagaatcc tgacaactgg taaggccast gaactgggag ctacacagcag gctgtgctg 300  
 a 301

&lt;210&gt; 267

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 267

aaagagcaca ggccagctca gctgcccctg gccatctaga ctacagctgg ctccatgggg 60  
 gttclcaatg ctgagtcuat ccaggaaaag ctacactaga cctcttgagg ctgaatcttc 120  
 atctcacaag gaagclctct agagcctgat attcctagac ttgatgggtt ggagtaaaag 180  
 ctcaattctg lctctctct lctttctctt caagttggtt ttctcactat cctctgttc 240  
 aattcgttc agcttgcltg cttagccct catttccaga agcttctctt cttaggcata 300  
 t 301

&lt;210&gt; 268

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 268

aatgtctcac tcaactaatt ccagacctao cgtggcctaa ttctgggagt tttcttttta 60  
 gatcttggga gacttggttc ttctaaggag aaggaggaag gacagatgta actttggatc 120  
 togaagggga agtctaattg aagtaattag tcaacggctc ttgttttaga tcttgggaata 180  
 tcttgggttg ctcaagttag ccttttggag aaagcaagta ttattcttaa ggagtaacca 240  
 ctcccatgg ttctaatttc taccatcaco aattgtatat tatgtattct ttggagaact 300  
 a 301

&lt;210&gt; 269

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien



<400> 269  
 taacaatata cactagatat ctttttaact gtccatcatt agcaccaatg aagattcaat 60  
 aasattacot ttattcacac atctcaaaac aattctgcaa attcttagtg aagtttaact 120  
 atagtcacag acottaaata ttccacattgt tttctatgtc tactgaaaat aagttcaacta 180  
 cttttctgga tattctttac aaaatcttat taaaattcct ggtattatca cccccaatta 240  
 tacagtagca caaccacott atgtagtttt tacatgatag ctctgtagaa gtttcacatc 300  
 t 301

<210> 270  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 270  
 cattgaagag cttlttgcga acatcagaac acnagtgcct ataaaattaa ttaagcotta 60  
 cacaagaata catcttcott ttattttctaa ggagttaaac atagatgtag ctgatgtgga 120  
 gagcttgctg gtgcagkgca tattggataa cactlctcat ggccgaattg atcaagtcaa 180  
 ccaactcctt gaactggatc atcagaagaa gggtggtgca ccatatactg cactagataa 240  
 tggaccaccc aactaaatto tctcaccagg ctgtatcagt aaactggctt aacagaaaaa 300  
 a 301

<210> 271  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature  
 <222> (1)...(301)  
 <223> n = A,T,C or G

<400> 271  
 aaaaggttct catasgatte acaattttaa taactatllg atagaaacatt ctttctcatt 60  
 ttatagctc atcttttaggg ttgataatca gttoatgctt cccttgcctg tcttgatcaa 120  
 gaattgcaat cacttcacaa gectgtatc gctccaatto tclataaaat gggtccaaag 180  
 tgaaccacag agccacagca cactcttttc ccttggtgac tgccttcacc ccatgaggtt 240  
 tctctctccc agatganaac tgatcctgag cccacatttt gggttttata gaagcagtc 300  
 c 301

<210> 272  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 272  
 taanltgcta agccacagat aacaccacac aaatgggaca aatcacgtgc ttcaaatgtc 60  
 ttctcagaaa acccaatgag cctgggaatct tcaataatac taacacatgac gtatttagga 120  
 tccaataatt ccttcattgat gggcagagaa aattcttttg gcacccctcc tgcacccaca 180  
 gcatcttctc caacaatat aaccttgagc ggcttctctt aatctatctt ctttggtttc 240  
 ctaaggactt ccattgcac tctacacata ttctctctac gcacccactag aattaagcag 300  
 g 301

<210> 273  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature  
 <222> (1)...(301)  
 <223> n = A,T,C or G

<400> 273  
 acatgtgtgt atgtgtatct ttgggaaan aanaagacat cttgtttcayt attttttttgg 60  
 agagangctg ggacatggat aatcacwtaa ttigtctayta tyacttttaant ctgactygaa 120  
 gaaccgtcta aaaaataaaat ttaccatgtc dtatatctcct tategtatgc ttatttcacc 180  
 ttttttctgt ccagagagag tatcagtgac ananatttma gggtagaamac atgmattggg 240  
 gggacttnly tttaacngam accctgcccg sgugccctcg makcngantt ccgcsananc 300  
 t 301

<210> 274  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)... (301)  
 <223> n = A,T,C or G

<400> 274  
 cttatataact ctttctcaga ggcaaaagag gagatgggta atgtagacaa ttctttgagg 60  
 aacagtaaat gattattaga gagaangaat ggaccaagga gacagaaatt aacttgtaaa 120  
 tgattctctt tggaaatctga atgagatcaa gaggccagct ttactttgtg gaaaagtcca 180  
 totaggtatg gttgcattct cgtcttcttt tctgcagtag ataatgaggt aaccgaaggc 240  
 aattgtgctt cttttgataa gaagctttct tggtcataac aggaaattcc aganaaagtc 300  
 c 301

<210> 275  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)... (301)  
 <223> n = A,T,C or G

<400> 275  
 tcggtgtcag cagcacgtgg cattgaacat tgcaatgtgg agcccaaaac acagaaaatg 60  
 gggtagaatt ggcaaacctt ctatttaact atgttggcaa ttttgccacc aacagtaagc 120  
 tggcccttct aataaaagaa aattgaanagg ttctctacta aacgganatta agtagtgag 180  
 tcaagagact ccagggctc agcgtacctg ccggggcggc cctctgaagc cgaattctgc 240  
 agatatacat cacaactggcg gncgctcgan catcactata gaaggnccaa ttgcacctat 300  
 a 301

<210> 276  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 276  
 tgtacacata ctcaataaat aaatgactgc attgtggtat tattactata ctgattatat 60  
 ttatcatgtg acttctaatt agaaaatgta tccaaaagca aaacagcaga tatacaaaat 120  
 taaagagaca gaagatagac attaacagat aaggcaactt atacattgag aatccaaate 180  
 caatacattt aaacatttgg gaaatgaggg ggacaaatgg aagccagatc aaatttgtgt 240  
 aaaactatto agtatgttto ccttgcttca tgtctgagaa ggctctcctt caatggggat 300  
 g 301

<210> 277  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature  
 <222> (1)...(301)  
 <223> n = A,T,C or G

<400> 277  
 ttgtgtgatg tcagtatttt attacttgcg ttatgagtgc tcacctggga aattctaaag 60  
 atacagagga cttggaggaa gcagagcaac tgaatttaat ttaaaagaag gaaaacattg 120  
 gaatcatggc actcctgata ctttcccaaa tcaacactct caatgcccc cctcgtcct 180  
 caccatagtg gggagactaa agtggccacg gatttgcctt angtgtgcag tgcgttctga 240  
 gttenctgtc gattacatct gaccagtctc ctttttcoga agtccntccg ttcaatcttg 300  
 c 301

<210> 278  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature  
 <222> (1)...(301)  
 <223> n = A,T,C or G

<400> 278  
 taccacacaa ctccagcctg ggcaacagag caagacctgt ctcaaagcat aaaatggaat 60  
 aacatataaa atgaaacagg gaaaatgaag ctgacaattt atggaagcca gggcttgcga 120  
 cagtctctac tgttattatg cattacctgg gaatttatat aagcccttaa taataatgcc 180  
 aatgaacatc tcatgtgtgc tcacaatgtt ctggcactat tataagtgtc tcacaggttt 240  
 tatgtgttct tegttaacttt atggantagg tactcggcgg cgaacacgct aagccgaatt 300  
 c 301

<210> 279  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature  
 <222> (1)...(301)  
 <223> n = A,T,C or G

<400> 279  
 aaagcaggaa cgacaaagct tgccttctctg gtatgttcta ggtgtattgt gacttttact 60  
 gttatattaa ttgccaatat aagtaaatat agattatata tgtatagtgt ttacacaaagc 120  
 ttagaccttt accttcacgc caccocacag tgcctgatat ttacagagtc gtcattgggt 180  
 atacatgtgt agttccaaag cacataagct agaanaanaa atatttctag ggagcactac 240  
 catctgtttt cacatgaat gccacacaca tagaactcca acatcaattt cattguacag 300  
 a 301

<210> 280  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 280  
 ggtaclggag lttctccc ctgtgaaaac gtaactactg ttgggagtga attgaggatg 60  
 tagaaagggt gtagaaccaa attgtggtca atggaatatg gagaatatgg ttctcactct 120  
 tgagaaaaaa acctaaagatt agccacagta gttgcctgta acttcagttt ttctgcctgg 180  
 gtttcatata gtttaggggt ggggttagat taagatctaa attacatcag gacaaagaga 240  
 cagactatta actccacagt taattaagga ggtatgttcc atgtttattt gttaaagcag 300  
 t 301

<210> 281  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 281  
 aggtacaaga aggggaatgg gaaagagctg ctgctgtggc attgttcaac ttgatattc 60  
 gccgagcaat ccaaactctg aatgaagggg catcttctga aaaaggagat ctgaatctca 120  
 atgtggtagc aatggcttta tgggtctata cggatgagaa gaactcctt tggagagaaa 180  
 tgtgtagcac actgcgatta cagctaaata aaccgtattt gtgtgtcatg ttgcatctc 240  
 tgacaagtga aacaggatct taogatggag ttttgtatga aaacaaagtt gcagtacctc 300  
 g 301

<210> 282  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 282  
 caggtactac aganttaaa tactqacaaq caagttagttt ctgggcgtgc acgaattgca 60  
 tccagaaccc aaaaatttaq aaattcaaaa agacattttg tgggcacclg ctgacacaga 120  
 agcgcagaaq caaagcccag gcagaaacct gctaacctta cagclcaqcc tgcaagaaag 180  
 cgcagaagca aagcccagc agaaccatgc taaccttaca gctcagcctg cacagaagcg 240  
 cagaagcaaa gccacggcag aacatgctaa ccttcagct cagcctgcac agsagcacag 300  
 a 301

<210> 283  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 283  
 atctgtatac ggcagacaaa ctttatarag tctagagagg tgagcgaag gatgcaaaag 60  
 caatttgagg gttttataat aatatctctg ttgaaaaaa aaatgtgtay ttgclactca 120  
 gtgcactcct agcatagka aggggttgccl clgacccatc aggtgatcat ttttctatc 180  
 acttccagg ttttatgcaa aaktttght aaattctata atgglgatat gcatttttta 240  
 ggaacatat acatllttaa aatctattt tatgtaagaa ctgacagacg aatttgcttt 300  
 g 301

<210> 284  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 284  
 caggtacaaa acgctattaa gtggttaga attigaacat ttgtggtctt tatttacttt 60  
 gcttcgtgtg tgggcaagc aacatcttcc ctaaatatat attaccaaga aagcaagaa 120  
 gcagattagg tttttgacaa aacaaacagg ccanaagggg gctgacctg agcagagcat 180  
 ggtgagagcc aagguatguy agggcaagtt tgtgtggac agatctgtgc ctactttatt 240  
 actggagtta aagaaacaa agttcattga lgtcgaagga tatatacagt gttagaant 300  
 a 301

<210> 285  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc feature  
 <222> (1)...(301)  
 <223> n = A,T,C or G

&lt;400&gt; 285

acatcaccat gatcggatcc cccacccatt ataogttgta tgtttacata aatactcttc	60
aatgatcatt agtgttttaa aaaaaatact gaaaactcct tctgcacccc aatctctaac	120
caggaaagca aatgctatit acagacctgc aagccctccc tcaaacnaaa ctattttctgg	180
attaaatatg tctgacttct tttgaggta caccgactagg caaatgctat ttaogtatctg	240
caaaagctgt ttgaagagtc aaagccccc tgtgaacacg atttctggac cctgtaacag	300
t	301

&lt;210&gt; 286

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 286

taccactgca ttccagcctg gttgacagag tgagactccg tctccaaaa aacttttgc	60
tglatatctt tlllgcctta cagtggalca ttctgtagg aagggcagc agattttll	120
atcaaaatgt gtcctgccag taagagatgt tataattctt tctccttct tccccccca	180
aaataagct accctatagc ttataagctt caaatllttg ctttttacta aatgctgatt	240
gtttctgttc attgtgtatg cttcatcacc tataattggc aaattccctt tttcccttg	300
t	301

&lt;210&gt; 287

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 287

tacagatctg ggaactaaat attaaaaatg agtgtggctg gatatatgga gaatgttggg	60
cccagaagga acgtagagat cagatattac aacagctttg ttttgagggt tagaaatag	120
aaatgatttg gttatgaagc cccagttctg gcagcagggc cagaatcctg accctctgco	180
ccgtggttat ctcctccca gcttggtcgc ctctgttct cccagtatc ccttlcgtt	240
gttgcctgct ttgtgaagcc atcaagcttt tctcgtctgt tttccctctc ttggtaatgc	300
t	301

&lt;210&gt; 288

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 288

gtacacctaa ctgcaaggac agctgaggaa tghtaatggc agcgcctttt aaagaagtac	60
agtcaatagg aagacaaatt ccagttccag ctccagtctg gtatctgcaa agctgcaaaa	120
gatcttttaa gacaatttca agagaatatt tccctaaagt tggcaatttg gagatcatac	180
aaaagcatct gcttttgtga ttttaattag utcatctgga uactggaaga atccaaacag	240
tctgccttaa ttttggatga atgcctgctg gaaattccat aatttagaaa gttcaaaaaa	300
a	301

&lt;210&gt; 289

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc feature

&lt;222&gt; (1)...(301)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 289

ggtacactgt ttccatgta tgtttctaca cattgctacc tcaagtgtcc tggaaaacta	60
gcttttgatg tctccaagta gtccaccttc atttaactct ttgaaactgt atcatctttg	120
ccaagtaaga gtggtggcct atttcagctg ctttgacaaa atgactggct cctgacttaa	180

cggtctataa atgaatgtgc tgaagcaaaag tgcctatggc ggaggcgaan aagaqaaaga 240  
 tgtgttttgt ttgggactct ctgtggtccc ttccaatgct gtgggtttcc aaccagngga 300  
 a 301

<210> 290  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)... (301)  
 <223> n - A,T,C or G

<400> 290  
 acactgagct cttcttgata aatatacaga atgcttggca tatacaagat tctatactac 60  
 tgactgatct gttcatttct ctcacagctc ttacccccaa aagcttttcc accctaagtg 120  
 ttctgacctc cttttctaata cacagtaggg atagaggcag anccaactac aatgaacatg 180  
 gagttctatc aagaggcaga aacagcacag aatcccaggt ttaccattcg ctacagtgct 240  
 tgccttgaac aaaaacattt ctccatgtct cttttcttcc atgcctcaag taacagtgag 300  
 a 301

<210> 291  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 291  
 caggtaacca tttcttctal cctagaaacc ttctcttcta tgttgttgaa acataacaaac 60  
 tatatcagct agailllllll tctatgctti acclgclatg gaaaalliga cacattctgc 120  
 tttactcttt tgtttatagg tgaatcacaa aatgtatttt tatgtattct gtatttcaat 180  
 agccatggct gtttacttca tttaatttat ttagcataaa gacattatga aaaggcctaa 240  
 acatgagctt cacttcccca ctaactaaft agcatctgtt atttcttaac cgtaatgoot 300  
 a 301

<210> 292  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)... (301)  
 <223> n - A,T,C or G

<400> 292  
 acccttttagt agtaatgtct aataataaat aagaatcaa ttttataagg tccatatagc 60  
 tgtattaaat aatttttaag tttaaaagat aaataccat cattttaaat gttggtattc 120  
 aaacccaaag natataaccg aaaggaaaaa cagatgagac ataaaatgat ttgonagatg 180  
 ggaatatatg tattyatga atgttnatta aattccagtt ataafagtgg ctacacactc 240  
 tcactacaca cacagacccc acagtccat atgcacaaa cacatttcca taacttgaaa 300  
 a 301

<210> 293  
 <211> 301  
 <212> DNA  
 <213> Homo sapien

<400> 293  
 ggtaccaggt gclgggccc gctgtttacc tgttctcact gaaaggtctg gctaatgctc 60  
 ttclgtagtc acttctgatt ctgacaaatca atcaatcaat ggcctagagc ctgactgtt 120  
 aacacaaacg tcaclggcag agtagcaaca gctttaagtc taatatcaaa gttgtttctgt 180

```

gtgagaattt tttaaaaggc tacctgtata ataacccttg tcatttttaa tgtacctcgg      240
ccgcgaccac gctaagccga attctgcaga tatccatcac actggcggcc gctcgagcat      300
g                                          301

```

```

<210> 294
<211> 301
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(301)
<223> n = A,T,C or G

```

```

<400> 294
tgaccataaa caatatatac tagctatctt tttaaactgtc catcatttagc accaatguag      60
attcaataaa attacottta ttacacatc tcaaaacaat tctgczaatt cttagtgaag      120
tttaactata gtcacaganc ttaaattatc acattgtttt ctatgtctac tgaaaatnag      180
ttcaactatt ttctgggata ttctttacaa aatcttatta aaattcctgg tattaloacc      240
ccaattata cagtagcaca accacottat gtagltttta catgalagct ctgtaggggt      300
t                                          301

```

```

<210> 295
<211> 305
<212> DNA
<213> Homo sapien

```

```

<400> 295
gtactttttc tctccctcc tctgaattta attctttcaa cttgcaattt gcaaggatta      60
cacatttcac tgtgatgtat attgtgttgc aaaaaaaa gtgtctttgt ttaaaattac      120
ttggtttgtg aatccatctt gcttttccc cattggaaat agtcattaac ccattcttga      180
actggtagaa aaactcttga agagctagtc tatcagcacc tgcagggtga attggatggt      240
tctcagaacc atttcaccca gacagccctgt ttctatcctg tttactaat tagtttgggt      300
tctct                                          305

```

```

<210> 296
<211> 301
<212> DNA
<213> Homo sapien

```

```

<400> 296
aggctactatg ggaagctgct aaaataatat ttgatagtaa aagtatgtaa tgtgctatct      60
cacctagtag taactaaaa ataaactgaa actttatgga atctgaagtt attttccttg      120
attaataga attaataaac caatatgagg aaacatgaaa ccatgcaatc tactatcaac      180
tttgaaaaag tgattgaacg aaccacttag ctttcagatg atgaacactg ataagtcatt      240
tgctcattact ataaatttta aactctgtta ataagatggc ctatagggag gaaaagggg      300
c                                          301

```

```

<210> 297
<211> 300
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(300)
<223> n = A,T,C or G

```

```

<400> 297
actgagtttt aactggacgc caagcaggca aggctggaag gttttgctct ctttgtgcta      60
aaqgttttga aaaccttgaa ggagaatcat ttgacaaga agtacttaag agtctagaga      120
acaaagangt gaaccagctg aaagctctcg ggggaanctt acatgtgttg ttaggcctgt      180

```

tccatccttg ggagtgcact ggccatccct caaaatttgt ctgggctggc ctgagtggtc 240  
accgcacctc ggccgcgacc acgctaagcc gaattctgca gatatccatc acactggcgg 300

<210> 298  
<211> 301  
<212> DNA  
<213> Homo sapien

<220>  
<221> misc\_feature  
<222> (1)...(301)  
<223> n = A,T,C or G

<400> 298  
tatggggttt gtcacccaan agctgatgct gagaaaggcc tccctggggc cccctcccgcg 60  
ggcatctgag agacctgggt ttccagtgtt tctggaaatg ggtcccagtg ccgcgggctg 120  
tgaagctctc agatcaatca cgggaagggg ctggcggtgg tggccacctg gaaccacct 180  
gtcctgtctg tttacatttc actaycaggt tttctctggg cattaonatt tgttcccta 240  
caacagtgac ctgtgcatto tgetgtggcc tctgtgtctt gcaggtggt ctcagcgagg 300  
t 301

<210> 299  
<211> 301  
<212> DNA  
<213> Homo sapien

<400> 299  
gttttgagac ggagtttcac tcttgttgcc cagaactggac tgcaatggca ggggtctctgc 60  
tcactgcacc ctctgcctcc caggttcgag caattctcct gcctcagcct cccaggtage 120  
tgggattgca ggctcagccc accataccca gctaattttt ttgtattttt agtagagacg 180  
gagtttgcgc atgttggcca gctgggtctc aactcctgac ctcaagcgac ctgcctgcct 240  
cgccctccca aagtgtctga attatagguu ttagtcaaca cgcctcagcct aaagatattt 300  
t 301

<210> 300  
<211> 301  
<212> DNA  
<213> Homo sapien

<400> 300  
attcagtttt atttgcctgc ccagtatctg taaccaggag tgccacaaa tcttgccaga 60  
tatgtccac acccactggg aaaggctccc acctggctac ttctctatc agctgggtca 120  
gtgcattcc acaaggttct cagcctaatt agtttcaata cctgccagtc tcaaaactta 180  
gtaaagcaag accatgacat tccccacgg aaatcagagt ttgcccacc gtcttggtac 240  
tataaagcct gcctotaaca gtccttgctt ctccacacca atcccagagc catccccat 300  
g 301

<210> 301  
<211> 301  
<212> DNA  
<213> Homo sapien

<400> 301  
ttaaattttt gagaggataa aaaggacaaa taatctagaa atqlqcttcc tlcagctctgc 60  
agaggacccc aggtctccaa gcaaccacat ggtcaagggc atgaataatt aaaagtgtgt 120  
gggaactcac aaagacctc agagctgaga ccccacaaac agtgggagct cacaagagcc 180  
ctcagagctg agacacccac aacagtggga gctcacaag accctcagag ctgagacacc 240  
cccacagca cctcgttcag ctgccacatg tgtgaataag gatgcaatgt ccagaagtgt 300  
t 301

<210> 302  
<211> 301



&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 302

```

aggtacacat ttagcttgtg gtaaatgact cacaataactg attttaaaat caagttaatg      60
tgaattttga aaattactac ttaactctaa ttcacaataa caatggcatt aagggtttgac      120
ttgagtttgt tcttagtatt atttatggta aataggctct taccacttgc aaataactgg      180
ccacatcatt aatgactgac ttcccagtaa ggctctctaa ggggtaagta ggaggatcca      240
caggatttga gatgctaagg cccagagat cgtttgatcc aacctotta ttttcagagg      300
g                                          301

```

&lt;210&gt; 303

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 303

```

aggtaccaac tgtggaaata ggtagaggat ctttttttct tccatataca actaagttgt      60
atatgttttt ttgacagttt aacacatctt cttctctcag agattcttct acaatagcac      120
tggctaattg aactaccgct tgcattgtta aatgggtggg ttgtgaattg atcataagcc      180
agtaacgggt atgtttttct aactgatctt ttgtctcttc caaagggacc tcaagcttc      240
catgattttt atatctgggg totagaaaag gagtcaatct gttttccctc ataaattcac      300
c                                          301

```

&lt;210&gt; 304

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 304

```

acatggatgt ttttttcag actgtcaacc tgaatttga tttgcttgac attgactaat      60
tattagtttc agtttcagct taccacattt ttgtctgcaa catgcaraas agacagtgc      120
ctttttagtg tctcatatca ggaatcatct cacatttggt ttgtccatta ctggtgcagt      180
gactttcagc cacttgggtg aggtggaggt ggccatagct ctccactgca aaattactga      240
ttttcttttt gtaattaat agtgtgtgtg tgaagattct ttgagatgag gtatatatct      300
c                                          301

```

&lt;210&gt; 305

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc feature

&lt;222&gt; {1}...{301}

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 305

```

gangtacagc gtggtcaagg taacaaqaag aaaaaaatgt gagtggcctc ctgggatgag      60
caggggggaca gacctggaca gacacgttgt cttttctctg tgtgggtagg acaatgggag      120
taaaggaggga gaaacagata caaatctctc aactcaglat taaggatatt tcatgcttag      180
aatatttggtg gaaacaaaga tacattcata tggcaaatga claacccatg tggaaacaaa      240
ttctgggatt taagliggat accaangaaa ttgtattaaa agagctcttc atggaataag      300
a                                          301

```

&lt;210&gt; 306

&lt;211&gt; 8

&lt;212&gt; PRT

&lt;213&gt; Homo sapien

&lt;400&gt; 306

Val Leu Gly Trp val Ala Glu Leu

1

5

<210> 307  
 <211> 637  
 <212> DNA  
 <213> Homo sapien

<400> 307

acaggggatg	aagggaaag	gagaggatga	ggaagccccc	ctggggattt	ggtttgggtcc	60
ttgtgatcag	gtggtctatg	gggtttatcc	ctacaaagaa	gaatccagaa	ataggggcac	120
attgagggaat	gatacttgag	cccaaaagagc	attcaatcat	tgtttttattt	gcctttttttt	180
cacaccattg	gtgagggagg	gattaccacc	ctgggggttat	gaagatgggtt	gaacaccccca	240
cacatagcac	cggagatatg	agatcaacag	tttcttagcc	atagagattc	acagcccaga	300
gcaggaggac	gcttgccac	catgcaggat	gacatggggg	atgcgctcgg	gattgggtgtg	360
aagnagcaag	gactgttaga	ggcaggcttt	ataqtaacaa	gacgggtggg	caaacctctga	420
ttcccgtagg	ggaatgtcat	ggtcttgctt	tactaagttt	tgagactggc	aggtagtqaa	480
actcattag	ctgagaaact	tgtggaalgc	actlgaacca	actgatagag	gaagtggcca	540
ggtaggggccc	tttcccagtc	ggtgtgggac	atatctggcc	agcttltgtg	gcactcctgg	600
ttacagatag	tggggcagcc	aataaaactg	aactcttg			637

<210> 308  
 <211> 647  
 <212> DNA  
 <213> Homo sapien

<220>

<221> misc feature

<222> (1)...(647)

<223> n = A,T,C or G

<400> 308

acgatttca	ctctcatgta	aatcgggtca	ctccgggggc	caaccacagc	tgggagccac	60
tgtccgggg	aaggttccata	tgggacttln	tactgcccaa	ggttctctac	aggtatataa	120
ggngootcag	agtalagatc	tggtagcaca	gaagaagaaa	caaacactga	tctctttctg	180
ccaccctctt	gaccttttgg	aactcctctg	accttttaga	acaagcctac	ctaataatctg	240
ctagagaaaa	gaccaacaac	ggcctcaaa	gatctcttac	catgaaggto	tcagctaatt	300
cttggctaag	atgtgggttc	cacattaggt	tctgaatatg	gggggaagg	tcaatttgc	360
catttttgtt	gtggataaag	tcaggatgcc	cagggggcag	agcagggggc	tgcttgcttt	420
gggaacaatg	gctgagcata	taaccatagg	ttatggggaa	caaaacaaca	tcaaagtcac	480
tgtatcaatt	gocatgaaga	cttgagggac	ctgaatctac	cgattcatct	taaggcagca	540
ggaccagttt	gagtggcaac	aatgcagcag	cagaatcaat	ggaaacaaca	gaatgattgc	600
aatgtccttt	tttttctcct	gcttctgact	tgataaaagg	ggaccgt		647

<210> 309  
 <211> 460  
 <212> DNA  
 <213> Homo sapien

<400> 309

acttttatagt	ttaggctgga	nattggaaaa	aaaaaaga	cagaaccaaca	tgtgatagat	60
aatatgattg	gctgcacact	tccagactga	tgaatgatga	acgtgatgga	ctattgtatg	120
gagcacatct	tcagcaagag	ggggaaatac	tcatcatttt	tggccagcag	ttgtttgatc	180
acccaaacac	atgccagaat	actcagcaaa	ccttcttagc	tcttgagaag	tcaaaagtcg	240
ggggaaattta	ttcctggcaa	ttttaattgg	actccttatg	tgagagcagc	ggctacccag	300
ctgggggtggt	ggagcgaacc	cgtaactagt	ggacatgcag	tggcagagct	cctggtaacc	360
acctagagga	atacacaggc	acatgtgtga	tgcgaagcgt	gacacctgta	gcactcaaat	420
ttgtcttgtt	tttgtcttct	ggtgtgtaag	attcttaagt			460

<210> 310  
 <211> 539  
 <212> DNA  
 <213> Homo sapien

```

<400> 310
acgggagctta tcaaatcaag ataggaaaag aagaaaactc aatatattata ggcagaaatg      60
ctaaaggttt taaaatatgt caggatttga agaaggcatg gatcaagcac aaagttcagt      120
taggaagagag aaacacagag ggaaagagaca caataaagat cattatgtat tctgtgagaa      180
gtcagacagt aaagatttgt ggaaatgggt tggttttgtg tatggtatgt attttagcaa      240
taattctttat ggcagagaaa gctaaaatcc tttagcttgc gtgaatgatc acttgcctga      300
ttcctcaagg taggcattgt gaaggagggt ttagaggaga cacagacaca atgaactgac      360
ctagatagaa agccttagta tactcagcta ggaatagtga ttctgagggc acactgtgac      420
atgattatgt cattacatgt atggtagtga tggggatgat aggaaggaag aacttatggc      480
atattttcac cccacacaaa gtcagttaaa tattgggaca ctaaccatcc aggtcaaga      539

```

```

<210> 311
<211> 526
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(526)
<223> n = A,T,C or G

```

```

<400> 311
caaatattgag caaatgacat agaattttac aaataaagaa gattattctg gggccatttc      60
ttttgacggt tctctcaaac tectaaagag gcctlaatga tccalaaatt atattatota      120
catttacagc atttaaaatg tglcagcat gaatatattg ctacagggga agclaaataa      180
atleaacatg gaataaagat ttgtccttaa atataatcta caagaagact ttgatatttg      240
tttttcacaa gtgaagcatt ctatataagt gtcataacct ttttggggga actatgggga      300
aaaatgggga aactctgaag ggttttaagt atcttacctg aagctacaga ctccataacc      360
tctctttaca gggagctcct gcagccocta cagaatagag tggctgagat tcttgattgc      420
acagcaagag ctctcatct aaaccctttc cttttttagt atctgtgtat caagtataaa      480
agttctataa actgtagtnt acttatitta atccccaaag cacagt      526

```

```

<210> 312
<211> 500
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(500)
<223> n = A,T,C or G

```

```

<400> 312
cctctctctc cccacccctt gactctagag aactgggttt tctcccagta ctccagcaat      60
tcattttctg aagcagttga gccactffat tccaaagtac actgcagatg ttcaaaactct      120
ccattttctt ttcccttcca cctgccagtt ttgotgactc tcaacttgct atgagtgtaa      180
gcattaagga cattatgctt ctctgattct gaagacagga cctgctcatg gatgactctg      240
gottcttagg aaatatattt tottccaaa tcagtaggaa atctaaactt atccctctct      300
tgcagatgtc tagcagcttc agacatttgg ttaagaaccc atgggaaaaa aaaaaatcct      360
tgctaattgt gtctcctttg taaccanqa ttcttatttg notggtatag aatatcagct      420
ctgaacgtgt ggtaaagatt tttgtgtttg aatataggag aaatcagttt gctgaaaagt      480
tagttottaat tatctattgg

```

```

<210> 313
<211> 718
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(718)

```

&lt;223&gt; n - A, T, C or G

&lt;400&gt; 313

ggagatttgc	gtggttttgc	gocgagggag	accaggaaga	tctgcatggt	gggaaggacc	60
tgatgataca	gaggtgagaa	ataagaaagg	ctgctgactt	taccatctga	ggccacacat	120
ctgctgaaat	ggagataatt	aacatcacta	gaaacagcaa	gatgacaata	taatgtctaa	180
gtagtacat	gtttttgcac	atttccagcc	cttttaata	tccacacaca	caggagacac	240
aaaaggaagc	acagagatcc	ctgggagaaa	tgcccgccg	ccatcttggg	tcacgatga	300
gootogccot	gtgectgntc	ccgcttctga	gggaaggaca	ttagaaatg	aattgatgtg	360
ttccttaaag	gatggcagga	aaacagatcc	tgttctggat	atttatttga	acgggattac	420
agatttgaaa	tgaagtccca	aagtgagcat	taccaatgag	aggaaaacag	acgagaaaat	480
cttgatggtt	cacaagacat	gcaacacaca	aaatggaaat	ctgtgatgac	acgagcagcc	540
aactggggag	gagataccac	ggggcagagg	tcaggattct	ggccctgctg	cctaactgtg	600
cgttatacca	atcatttcta	tttctacctt	caaaccaagt	gtngaatatc	tgaattacgg	660
ttcttntggo	ccacattttc	atnatecacc	ccntcttttt	aannttantic	caaatgt	718

&lt;210&gt; 314

&lt;211&gt; 358

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 314

gtttatttcc	attacagaaa	aaacatccag	acaatgtata	ctatttcaaa	tatatccata	60
cataatcaaa	tatagctgta	gtacatgttt	tcattgggtg	agattaccac	aaatgcaggg	120
caacatgtgt	agatctcttg	tcttattctt	ttgtctataa	tactgtattg	tgtagtccaa	180
gotctcggtg	gtccagccac	tgtgaaacat	gtccctttta	gattaaacctc	gtggacgctc	240
ttgttgtatt	gctgaactgt	agtgcctctg	attttgcttc	tgtctgtgaa	ttctgttctg	300
tctggggcat	ttccttctga	tgcagaggac	caccacacag	atgacagcaa	tctgaatt	358

&lt;210&gt; 315

&lt;211&gt; 341

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 315

taccacttcc	ccgctggcac	tgatgagccg	cctcaacctg	gtcaccagca	ccatgaaggc	60
atagggtgatg	atgaggacat	ggaatgggcc	cccaaggatg	gtctgtccaa	agaagcgagt	120
gaccccatc	ctgaagatgt	ctggaacctc	taccagcagg	atgatgatag	ccccaatgac	180
agtcaccagc	tccrcgacca	gocggatata	gtccttaggg	gtcatgtagg	cttccctgaag	240
tagcttctgc	tgtaaagagg	tgttgtcccg	ggggctcgtg	cggttatttg	tcctgggctt	300
gagggggcgg	tagatgcagc	acatggtgaa	gcagatgatg	t		341

&lt;210&gt; 316

&lt;211&gt; 151

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 316

agactgggca	agactcttcc	gccccacact	gcaatttggg	cttggttgcg	tatccattta	60
tgtgggcctt	tclogaattt	ctgattatac	accccactgg	agcgtgtgt	tgaclggact	120
cattcagggg	gctctgggtg	caatatagtt				151

&lt;210&gt; 317

&lt;211&gt; 151

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 317

agaactagtg	gatccaatg	aaataacctga	aacatatatt	ggcattttatc	aatggctcaa	60
atcttcattt	atctctggcc	ttaacctggg	ctcctgaggc	tgcggccagc	agatcccagg	120
ccagggtctt	gtctcttgca	caactgcttg	a			151

<210> 318  
 <211> 151  
 <212> DNA  
 <213> Homo sapien

<400> 318  
 actggtgga ggcgtgttt agttggctgt ttccagaggg gtctttcgga gggacctctt 60  
 gctgcaggct ggagtgtctt tattcctggc qggagaccgc acattccact gctgaggctg 120  
 tgggggcagt ttatcaggca gtgataaaca t 151

<210> 319  
 <211> 151  
 <212> DNA  
 <213> Homo sapien

<400> 319  
 aactagtga tccagagcta taggtacagt gtgatctcag ctttgcaaac acattttcta 60  
 catagatagt actaggtatt aatagatatg taaagaaaga aatcacacca ttaataatgg 120  
 taagattggg tttatgtgat tttagtgggt a 151

<210> 320  
 <211> 150  
 <212> DNA  
 <213> Homo sapien

<400> 320  
 aactagtga tccactagtc cagtgtggty gaattccatt gtgttggggt tctagatcgc 60  
 gaggcgctgc cttttttttt tttttttttg ggggggaatt tttttttttt aatagttatt 120  
 gagtgttcta cagcttcacg laaataccat 150

<210> 321  
 <211> 151  
 <212> DNA  
 <213> Homo sapien

<400> 321  
 agcaactttg tttttcatcc aggttatitt aggetttagga ttctctctca cactgcagtt 60  
 tagggtggca ttgtaaccag ctatggcata ggtgttaacc aaaggctgag taaacatggg 120  
 tgctctgag aatcaaatg ctccatacac t 151

<210> 322  
 <211> 151  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature  
 <222> (1)...(151)  
 <223> n = A,T,C or G

<400> 322  
 atccagatc ttctctgtt tcttgccttc cttttcttc ttcttasatt ctgcttgagg 60  
 tttgggcttg gtcagtttc cacaggcctt ggagatgggt acagtcttct ggcattcggc 120  
 attgtgcagg gctcgttcca nacttccagt t 151

<210> 323  
 <211> 151  
 <212> DNA  
 <213> Homo sapien

<220>  
 <221> misc\_feature

&lt;222&gt; (1)...[151]

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 323

tgaggacttg	tkttttttt	ctttatttll	aatcctctta	ckttgttaat	atattgccta	60
nagactcant	tactacccag	tftgtggttt	twtgggagaa	atgtactagg	acagttagct	120
gttcaatyaa	aaagacactt	ancccatgkg	g			151

&lt;210&gt; 324

&lt;211&gt; 461

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc feature

&lt;222&gt; (1)...(461)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 324

acctgtgtgg	aatttcagct	ttcctcatgc	aaaaggattt	tgtatcccg	gootacttga	60
agaagtgtgc	agctaaagga	atccagggtt	ttgggttggac	tgtaataacc	tttgatgaaa	120
agagttacta	cgaatcccat	cttgggttcca	gctatatcac	tgacagcatg	gtagaagact	180
gcgaacctca	cttctagact	ttcacgggtg	gacgaaacgg	gttcagaaac	tgccaggggc	240
ctcatacagg	gatataaaaa	taccttttgt	gtatcccagg	ccctggggaa	tcagggtgact	300
cacacaaatg	caatagtgtg	tcaactgcatt	tttacctgaa	ccaaagctaa	acccgggtgtt	360
gccaccatgc	accatggcat	gccagagttc	aacactgttg	ctcttqaaa	ttgggtctlga	420
aaaaacgcac	aagagccct	gccctgccct	agctlgangca	c		461

&lt;210&gt; 325

&lt;211&gt; 400

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 325

acactgtttc	catgttatgt	ttctacacat	tgtacctca	gtgtctctgg	aaacttagct	60
tttgatgtct	ccagtagtgc	caccttcatt	taactctttg	aaactgtatc	atctttgcca	120
agtaagagtg	gtggcctatt	tcagctgctt	tgacaaaatg	actggctcct	gacttaacgt	180
ttctataaat	aatgtgtctg	agcaaatgtc	ccatgggtgg	ggcgaaagag	agaaaagatct	240
gttttgtttt	ggactctctg	tggctccctc	caatgtctgt	ggtttccaac	caggggaagg	300
gtcccttttg	cattggccag	tgccataacc	atgagcacta	cgtaccatg	gttctgccc	360
ctgygccaaq	aggtgtgttt	gcaagatga	aatqaatgat			400

&lt;210&gt; 326

&lt;211&gt; 1215

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 326

ggaggactgc	agcccgcaact	cgacagccctg	gcaggcgggca	ctgggtcatgg	aaaacgaatt	60
gttctgtctg	ggcgtcctgg	tgcacccgca	gtgggtgtctg	tcagccgcac	actgtttcca	120
gaactcctac	accatcgggc	tgggectgca	cagtcttgag	gcagaccaag	agccaggag	180
ccagatgggtg	gaggccagcc	tctcgttaac	gcacccagag	tacaacagac	ccttgcctgc	240
taacgacctc	atgtctcatc	agttaggacg	atccgtgtcc	gagtctgaca	ccatccggag	300
catcagcatt	gtctcgagct	gccctacccg	ggggaaactct	tgccctgttt	ctggctgggg	360
tctgtctggc	aacggcagaa	tgcctacogt	gttgcaagtgc	gtgaacgtgt	cgggtgtgtc	420
tgaggaggtc	tgcaagtaag	totatgaccc	gtgtgtaccac	cccagcatgt	tctgogccgg	480
cggaggggcaa	gaccagaaag	actcctgcaa	cgggtgactct	ggggggcccc	tgatctgcaa	540
cgggtacttg	cagggccttg	tgtctttcgg	aaaagccccc	tgtggcccaa	ttggcgtgcc	600
aggtgtctac	accacctctc	gcacatttc	tgaglggata	gagaaaaacc	tcacggccag	660
ttactcttg	ggactgggaa	cccalqaaat	tgacccccaa	alacatcctg	cgggaaggaat	720
tcaggaatat	ctgttcccag	ccctctctcc	ctcaggcccc	ggagtcacgg	cnnccagccn	780
ctcctccctc	aaaccaagg	tacagctccc	cagccctccc	tcctctcagac	ccaggagttcc	840

```

agacccccca gccctctctc cctcagaccc aggagtcacag cccctcctcc ctacagaccca 900
ggagtcacaga cccccacagc cctctctcct cagacccagg ggtccaggcc cccacccctt 960
ctcctctcag actcagaggt ccaagccccc aacccctcct tccccagacc cagaggtcca 1020
ggtccacagcc cctctctcct cagacccagg ggtccaatgc caactagact ctccctgtac 1080
acagtgcccc ctigtggcac gttgacccaa ccttaccagt tggtttttca ttttttgtcc 1140
ctttccctca gatccagaaa taaagtctaa gagaagcgca aaaaaaaaaa aaaaaaaaaa 1200
aaaaaaaaaa aaaaaa 1215

```

<210> 327  
 <211> 220  
 <212> PRT  
 <213> Homo sapien

```

<400> 327
Glu Asp Cys Ser Pro His Ser Gln Pro Trp Gln Ala Ala Leu Val Met
1      5      10      15
Glu Asn Glu Leu Phe Cys Ser Gly Val Leu Val His Pro Gln Trp Val
20     25     30
Leu Ser Ala Ala His Cys Phe Gln Asn Ser Tyr Thr Ile Gly Leu Gly
35     40     45
Leu His Ser Leu Glu Ala Asp Gln Glu Pro Gly Ser Gln Met Val Glu
50     55     60
Ala Ser Leu Ser Val Arg His Pro Glu Tyr Asn Arg Pro Leu Leu Ala
65     70     75     80
Asn Asp Leu Met Leu Ile Lys Leu Asp Glu Ser Val Ser Glu Ser Asp
85     90     95
Thr Ile Arg Ser Ile Ser Ile Ala Ser Gln Cys Pro Thr Ala Gly Asn
100    105    110
Ser Cys Leu Val Ser Gly Trp Gly Leu Leu Ala Asn Gly Arg Met Pro
115    120    125
Thr Val Leu Gln Cys Val Asn Val Ser Val Val Ser Glu Glu Val Cys
130    135    140
Ser Lys Leu Tyr Asp Pro Leu Tyr His Pro Ser Met Phe Cys Ala Gly
145    150    155    160
Gly Gly Gln Asp Gln Lys Asp Ser Cys Asn Gly Asp Ser Gly Gly Pro
165    170    175
Leu Ile Cys Asn Gly Tyr Leu Gln Gly Leu Val Ser Phe Gly Lys Ala
180    185    190
Pro Cys Gly Gln Val Gly Val Pro Gly Val Tyr Thr Asn Leu Cys Lys
195    200    205
Phe Thr Glu Trp Ile Glu Lys Thr Val Gln Ala Ser
210    215    220

```

<210> 328  
 <211> 234  
 <212> DNA  
 <213> Homo sapien

```

<400> 328
cgcctcgtctc tggtagctgc agccaaatca taaacggcga ggactgcagc ccgcactcgc 60
agccctggca ggcggcactg gtcattgaaa acgaattggt ctgctcgggc gtccctggtc 120
atccgcagtg ggtgctgtca gccacacact gtttcagaa ctctacacc atcgggctgg 180
gcctgcacag tcttgaggcc gaccaagagc caggagacca gatggtggag gcca 234

```

<210> 329  
 <211> 77  
 <212> PRT  
 <213> Homo sapien

```

<400> 329
Leu Val Ser Gly Ser Cys Ser Gln Ile Ile Asn Gly Glu Asp Cys Ser
1      5      10      15

```

Pro His Ser Gln Pro Trp Gln Ala Ala Leu Val M t Glu Asn Glu Leu  
                   20                  25                  30  
 Phe Cys Ser Gly Val Leu Val His Pro Gln Trp Val Leu Ser Ala Thr  
                   35                  40                  45  
 His Cys Phe Gln Asn Ser Tyr Thr Ile Gly Leu Gly Leu His Ser Leu  
                   50                  55                  60  
 Glu Ala Asp Gln Glu Pro Gly Ser Gln Met Val Glu Ala  
                   65                  70                  75

<210> 330  
 <211> 70  
 <212> DNA  
 <213> Homo sapien

<400> 330  
 cccacacacac tggcccgatc ccatccctga ctcgcgcctc aggatcgctc gtctctggta 60  
 gctgcagcca 70

<210> 331  
 <211> 22  
 <212> PRT  
 <213> Homo sapien

<400> 331  
 Gln His Asn Gly Pro Ile Pro Ser Leu Thr Pro Pro Ser Gly Ser Leu  
   1                  5                  10                  15  
 Val Ser Gly Ser Cys Ser  
                   20

<210> 332  
 <211> 2507  
 <212> DNA  
 <213> Homo sapien

<400> 332  
 tgggtgcgct gcagccggca gagatggttg agctcatggt cccgctggtg ctcctcttc 60  
 tgcccttctc tctgtatatg gctgcgcccc aaatcaggaa aatgctgtcc agtgggggtg 120  
 gtacatcaac tgttcagctt cctgggaaag tagttgtggt cacaggagct aatacaggta 180  
 tcgggaagga gacagccaaa gagctggctc agagaggagc tcgagtatat ttagcttgcc 240  
 gggatgtgga aaggggggaa ttggtggcca aagagatcca gaccacgaca gggaaccage 300  
 aggtgttggg cgggaaaactg gacctgtctg atactaagtc tattcgagct ttgtctaagg 360  
 gctttttagc tgaggaaaaq caccctccag ttttgatcaa caatgcagga gtgatgatgt 420  
 gtccgtactc qaagavagca gatggctttg agatgcacat aggagtcac cacttgggtc 480  
 acttctctct aaccatctc ctgctagaga aactaaggga alcagcccca tcaaggatag 540  
 taagtgtgtc ttccttcgca calcccttgy gaaggatcca ctccataaac ctgcagggcg 600  
 aqaattctca caatgcaggc ctggcctact gtcacagcaa gctagccaac atcccttca 660  
 ccagggaact ggcccgga ga ctaaaaggct ctggcggtac gacgtattct gtacaccctg 720  
 gcacagtcca atctgaactg gttcggcact catctttcat gagatggatg tgggtggcttt 780  
 tctctttttt catcaagact cctcagcagg gaggccagac cagcctgcac tgtgccttaa 840  
 cagaaggtct tgagattcta agtgggaatc atttcagtga ctgtcatgtg gcctgggtct 900  
 ctgcccacgc tctgaatgag actatagcaa ggcggtgtg ggacgtcagt tgtgacctgc 960  
 tgggcctccc aatagactaa caggcagttc cagttggacc caagagaaga ctgcagcaga 1020  
 ctacacagta cttcttgtca aaatgattct ccttcaagggt tttaaaaacc tttagcacia 1080  
 agagagcaaa accttcagc cttgcctgct tgggtgtccag ttaaaaactca gtgtactgcc 1140  
 agattcgtct aaatgtctgt catgtccaga ttactttgc ttctgttact gccagagtta 1200  
 ctagagatat cataatagga taagaagacc ctcatatgac ctgcacagct cattttcctt 1260  
 ctgaagaaga ctactacct ggagaatcta agctatagca gggatgattt atgcaaatit 1320  
 gaactagctt ctttqttcac aattcagttc ctcccaacca accagttctt acttcaagag 1380  
 ggccacactg caacctcagu ttaacatgaa taacaaagac tggctcagga gcagggtgtg 1440  
 ccaggcatg gtggalcaac ggaggtcagt agttcaagac cagcctggcc aacatggtga 1500  
 aacccacact ctactaaaaa ttgtgtatat ctttgtgtgt cttcctgttt atgtgtgcca 1560  
 agggagtatt ttacaaagt tcaaaacagc caaatatc agagatggag caaaccagtg 1620



ccatccagtc	tttatgcaca	tgaaatgctg	caaagggaag	cagattctgt	atatgttgg	1680
aactacccac	caagagcaca	tgggtagcag	ggaagaagta	aaaaaagaga	aggagaatac	1740
tggaaagataa	tgacacaaat	gaagggaacta	gttaaggatt	aactagccct	ttaaggatta	1800
actagtttaag	gattaatagc	naaagayatt	aatatgtcta	acatagctat	ggagggaattg	1860
agggcaagca	cccaggactg	atgaggtctt	aacaaaaacc	agtgtggcaa	aaaaaaauaa	1920
aaaaaaaaaa	aaaaatccta	aaacacacac	aacaaaaaaa	acattcttct	attcagaaaa	1980
attatcttag	ggactgatat	tggtaattat	ggtaaatia	ataatatttt	ggggcatttc	2040
cttacattgt	cttgacaaga	ttaaaatgtc	tgtgccaaaa	ttttgtattt	tatttggaga	2100
cttcttatca	aaagtaatgc	tgccaaaggc	agtctaagga	attagtagtg	ttcccatcac	2160
ttgtttggag	tgtgctatct	taaaagattt	tgatttctct	gaatgacaat	tatattttta	2220
ctttgttggg	ggaaagagtt	ataggaccac	agtcttcaat	tctgatactt	gtaaaltta	2280
cttttattgc	actlqctttg	accalttaagc	tatatgttta	gaattgttca	ttttacggaa	2340
aaattagaaa	aatlctgala	atagtgcaga	ataaatgaat	laattgttta	cttaatttat	2400
attgaactgt	caatgcacaa	ttaaatctct	ttttgattat	ttttgttct	caattaccag	2460
aataaaaaacg	taagaattaa	aagttctgatt	acaaaaaaa	aaaaaaa		2507

<210> 333  
 <211> 3030  
 <212> DNA  
 <213> Homo sapien

<400> 333

gcaggcgact	tgcgagctgg	gagcgattta	aaacgctttg	gattcccccg	gcctgggttg	60
ggagagcgag	ctgggtgccc	cctagattcc	ccgccccgcg	acctcatgag	ccgacccctcg	120
gtcccatgga	gcccggcaat	tatgccacct	tggatggagc	caaggatatac	gaaggcttgc	180
tgggagcgga	agggggcgcg	aatctggtcg	cccatccccc	tctgaccagc	caccacgcgg	240
cgcctacgct	gatgcctgct	gtcaactatg	cccccttggc	tctgccaggc	tggcgggagc	300
cgccaaagca	atgccaccca	tgccttgggg	tgcgccaggg	gaagtcccca	gctcccgtgc	360
cttatggtta	ctttggaggc	gggtactact	cctgcccagt	gtcccggagc	tgcctgaaac	420
cctgtgcccc	ggcagccccc	ctggcgcgct	accncgcggc	gactcccaag	gcaggggagc	480
agtaccocag	ycgccccact	gagtltgctt	tctctccggg	atatccggga	acctaccagc	540
ctatggccag	ttaactggac	gtgtctgtgg	tgcagactct	gggtgctcct	ggagaacccg	600
gacatgactc	cctgttgccct	gtggacagtt	accagtcttg	ggctctcgct	gggtggctgga	660
acagccagat	gtgttgccag	ggagaaacaga	accacccagg	tcccttttgg	aaggcagcat	720
ttgcagactc	cagcggggcag	caacctctct	acgectgccc	ctttcgctgc	ggccgcaaga	780
aagtcattcc	gtacagcaag	gggcagttgc	gggagctgga	gcgggagtat	gcggctaaca	840
agttcatcac	caaggacaag	aggcgcaaga	tctcggcagc	caccagcctc	tggagcgccc	900
agattaccat	ctggtttcag	aaacggccgg	tcaaaagaga	gaaggttctc	gccaagggtg	960
agaacagcgc	taccccttaa	gagatctcct	tgcctgggtg	ggaggagcga	aagtgggggt	1020
gtcctgggga	gaccaggaac	ctgccaagcc	caggctgggg	ccaaggactc	tgcctgaagg	1080
cccctagaga	caacacccct	cccaggccac	tggctgctgg	actgttctct	aggagcgggc	1140
tgggtatcca	gtatgtgag	ggagacggaa	cccatgtga	cagcccactc	caccaggggt	1200
cccaaggaac	ctggcccagt	cataatcatt	cactcgtaca	gtggcaataa	tcaagataac	1260
cagtactagc	tgcctatgac	gttagcctca	tattttctat	ctagaactct	gtagagcact	1320
ttagaaaccc	ctttcatgaa	ttgagctaat	katgaataaa	tttggagggc	gatccctttg	1380
cagggaagct	ttctctcaga	cccccttcca	ttacacctct	caccctggta	acagcaggaa	1440
gactgagggg	agggggacgg	gcagattcgt	tgtgtggctg	tgatgtccgt	ttagcatttt	1500
tctcagctga	cagctgggta	ggtggacaat	tgtagaggct	gtctcttctt	ccctccttgt	1560
ccaccccata	gggtgtaccn	actggtcttg	gaagcaccac	tccttaatac	gatgattttt	1620
ctgtcgtgtg	aaatgaagc	cagcaggctg	cccctagtca	gtccttctct	ccagagaaaa	1680
agagatttga	gaagtgccct	gggtaattca	ccattaattt	cctcccccac	actctctgag	1740
ctttccctta	atatttctgg	tggttctgac	caaagcaggt	catggtttgt	tgagcatttg	1800
ggatcccagt	gaagttagat	ttttagacct	tgcatactta	gcccttccca	ggcacaacgc	1860
gagtggcaga	ctggtgccaa	ccctgttttc	ccagtcacag	tagacagatt	cacagtgcgg	1920
aattctggaa	gctggagaca	gacgggctct	ttgcagagcc	gggactctga	gagggacatg	1980
agggcctctg	cctctgtgtt	cattctctga	tgtcctgtac	ctgggctcag	tgcocgggtg	2040
gactcatctc	ctggccgcgc	agcaaaagcca	gggggttcgt	gctgggtcct	cctgcacctt	2100
aggetggggg	tggggggcct	gcccggcgcat	tctccacgat	tgaagcgaca	ggcctgaagt	2160
ctggacaaac	cgcagaacgc	aagctccgag	cagcggttcg	gtggcgagta	gtgggttcgg	2220
tggcgagcag	ttggtgtgtg	gocggcgccg	ccactacctc	gaggacactt	cctcccggga	2280
gccagctctc	ctagaaaccc	cgcggcgccg	gcccagacca	agtglttatg	gcccggggtc	2340
gggtgggata	ctagccctgt	ctcctctcct	gggaaggagc	gagggtggga	cgtgacttgc	2400

acacctacaa	atctatttac	caagaggag	ccccggactg	aggggaaagg	ccaaaggagt	2460
tgagtgcatt	cggaatggg	gttcaggga	aggggacgag	gaggaggaag	atgagggtcg	2520
tttccgtatt	taaaaaatcg	tcgaagcccc	gtgggtccagc	ltagggtccg	cggttacatg	2580
cgccgctcag	agcaggtcac	tttctgcctt	ccacgtctct	cttcaaggaa	gccccatgtg	2640
ggtagctttc	aatatcgong	gttcttactc	ctctgcctct	ataagctcaa	acccaccaac	2700
gatcgggcaa	gtaaaccccc	tcctctgcgg	acttcgggac	tgccgagagt	tcagcgcgga	2760
tgggctgtg	gggagggggc	aagatagatg	agggggagcg	gcattggtgc	gggtgacccc	2820
ttggagagag	gaaaaagggc	acaagggggg	ctgccaccgc	cactaacgga	gatggccctg	2880
gtagagacot	ttgggggtct	ggaacctctg	gaactcccat	gctctaactc	ccacactctg	2940
ctatcagaaa	cttaaaacttg	aggattttct	ctgtttttca	ctcgcaataa	aytcagagca	3000
aacaaaaaaa	aaaaaaaaaa	aaaactcgag				3030

&lt;210&gt; 334

&lt;211&gt; 2417

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 334

ggcgccgct	ctagagctag	tgggatcccc	cggtctgcac	gaattcggca	cgagtgaatt	60
ggagttttac	ctgtatttgt	ttaatttcaa	caagcctgag	gactagccac	aatgtacccc	120
agtttacaaa	tgaggaaaca	ggtgcacaaa	ggttgttacc	tgtaaaagg	cgtaggtggc	180
agggcccaag	tttgagccca	gttatgtctg	atgacttag	cctatgtctc	ttaaacttct	240
gaatgctgac	cattgaggat	atctaaactt	agatcaattg	cattttccct	ccaagactat	300
ttactlatca	atacaataat	accaccttta	ccaatctatt	gttttgatac	gagactcaaa	360
tatgncagat	atatgtaaaa	gcaacclaca	agctctctaa	icatgtccac	ctaaaagatt	420
cccgggatct	aataagctca	aaqaaacttc	tlctagaaat	ataaaagaga	aaattggatt	480
atgcacaaat	tcattattaa	ttt.ttttont	ccctccttta	altcagcaaa	catttatctg	540
ttgttgactt	tatgcagtat	ggccttttca	ggeltggggg	Acagggtgaag	aacgggggtgc	600
cagaatgcac	cctcctaacta	atgggggtcag	tacacatttg	catttttaaaa	tgccctgtcc	660
agctgggcat	ggtggatcat	gootgtaatc	tcaacattgg	aaggccaagg	caggaggatt	720
gottcagccc	aggagttcaa	gaccagcctg	ggcaacatag	aaagacccca	tctctcaatc	780
aatcaatcaa	tgcctgtct	ttgaaaataa	aactctttaa	gaaagggtta	atgggcaggg	840
tytggtagct	catgctcata	atacagcaat	ttgggaggct	gaggcaggag	gatcaattta	900
gcccaggaat	tcaagaccag	cctgggcaac	aagtgcaccc	tcatctcaat	tttttaataa	960
aatgaalaca	tacataagga	aagataaaaa	gaaaagttta	atgaaagaat	acagtataaa	1020
acaaatctct	tggauctaaa	agtatttttg	ttcaagccaa	atattgtgaa	tcacctctct	1080
gtgttgagg	tacagaalat	ctaagcccaag	gnaactgagc	ugaaagttca	tgtactaaat	1140
aatcaacccg	agggcaggca	aaantggagc	taactaantca	atccgaggca	aggggcaaat	1200
tagacggaac	ctgaactctg	ctatltaaag	gacaaolttc	cctctgttgt	atttt.tcttl	1260
tattcaatgt	aaaaggatag	aaactctcta	aaactcaaaa	caabqlllgh	caggagttac	1320
aaaccatgac	caactaatta	tggggcaatca	taaaatatga	ctghatgaga	tcttgctggt	1380
ttacaaagt	taccractgt	taatcccttt	aaacattaat	gaacttaaaa	atgaatttac	1440
ggagatttga	atgtttcttt	cctgtctgtat	tagtgtgctc	aggctgccat	aacaaaatac	1500
cacagactgg	gaggcttaag	taacagaaat	tcattttctca	cagttctggg	ggctggaagt	1560
ccacgatcaa	ggtgcaggaa	aggcaggctt	cattctgagg	ccccctctct	ggctcacatg	1620
tggccacoot	cccactgcgt	gotcacatga	cctctttgtg	ctcctggaaa	gagggtgttg	1680
gggacagagg	gaaagagaag	gagaggggac	tctctggtgt	ctcgtcttcc	aaggacoota	1740
acctggggca	ctttggccca	ggcactgttg	ggtgggggtg	tgtggctgct	ctgctctgag	1800
tggccaaagt	aagcacaacg	aaaaatgtcc	aaagctgtgc	agcaaaagaca	agccaccgaa	1860
cagggaatctg	ctcatcagtg	tggggacctc	caagtcggcc	acccctggagg	caagccccca	1920
cagagcccat	gcaaggtggc	agcagcagaa	gaagggaatt	gtccctgtcc	ttggcacatt	1980
cctcaccqac	ctggtgatgc	tggacactgc	gatgaatggt	aatgtggatg	agaaatatgat	2040
ggactccag	aaaaggagac	ccagctgtct	aggtggctgc	aaatcattac	agccttcatc	2100
ctggggcagg	actggggggc	tggttctggg	tcagagagca	gcccagtgag	ggtgagagct	2160
acagcctgtc	ctgcagctg	gatccccagt	cccgggtcaac	cagttaatcaa	ggctgagcag	2220
atcaggcctc	ccggagctgg	tcttgggaag	ccagccctgg	ggtgagttgg	ctcctgctgt	2280
ggtaactgga	caatatctgc	ataaattcaa	tgcgcccctg	tatccctttt	tcttttttca	2340
ctgtctacat	ctaaatcac	talqcatact	aqlctttgtt	agtgtttcta	ttcmaacttaa	2400
tagagatatg	ttatact					2417

&lt;210&gt; 335

&lt;211&gt; 2984

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 335

atccctccct	ccccactctc	ctttccagaa	ggcacttggg	gtcttatctg	ttggactctg	60
aaaacacttc	aggcgccctt	ccaaggcttc	cccaaacccc	taagcagccg	cagaagcget	120
cccgagctgc	cttctcccac	actcaggtag	togagttgga	gaggaagttc	agccatcaga	180
agtaoctgtc	ggccrctgaa	cgggcccacc	tggccaagaa	cotcaagctc	acggagaccc	240
aagtgaagat	atgggtccag	aacagacgct	ataagactaa	gogaaagcag	ctctoctcgg	300
agctgggaga	cttggagaa	cactcctctt	tgcgggcctt	gaaagaggag	gccttctccc	360
gggcctccct	ggtctccgtg	tataacagct	atccttacta	cccatacctg	tactgctggg	420
gcagctggag	cccagctttt	tggtaatgcc	agctcagggt	acaaccatta	tgatcaaaaa	480
ctgccttucc	cagggtgtct	ctatgaaaag	cacaaggggc	caaggctcag	gagcaaggag	540
tytgacacac	aaagctattg	gagatttgcg	tggaaatctc	asattcttca	ctggtgagac	600
aatgaacaaa	cagagacagt	gaaagtctta	atacctaagt	cattccccc	gtgcatactg	660
taggtcattt	tttttgcttc	tggctacctg	tttgaggggg	agagagggga	aalcaaglgg	720
tattttccag	cactltgtat	gattttggat	gagctgtaca	cccaaggalt	ctgtctctga	780
actccalcct	ctgtgttcat	lgnatctcaa	ctctgaagga	gcacacctaa	caggagaaag	840
gacaaccagg	alqaggetgt	caccacactga	atlaaacctta	agtcacagaag	cctcctgttg	900
gccltggaat	atggcccagg	ctctctctgt	ccctgtasaa	gagaggggca	aatagagagt	960
ctccaagaga	acgcctctat	gctcagcaca	tatttgcatg	ggagggggag	atgggtggga	1020
ggagatgaaa	atctcagctt	ttcttatttc	tttttattcc	ttttaaaatg	gtatgccaac	1080
ttaagtattt	acagggtggc	ccaaatagaa	caagatgcac	tcgtctgtgat	tttaagacaa	1140
gctgtataaa	cagaactcca	ctgcaagagg	gggggcgggg	ccaggagaat	ctccgcttgt	1200
ccaagacagg	ggcctaagg	gggtctccac	actgtgcta	ggggctgttg	cattttttta	1260
ttagttagaa	gtggaaggc	ctcttctcaa	cttttttccc	ttgggtgga	gaatttagaa	1320
tcagaagttt	cctggagttt	tcaggctatc	atatatactg	tatcctgaaa	ggcaacataa	1380
ttcttctctc	cctcctttta	aaattttgtg	ttcctttttg	cagcaattac	tcactaaagg	1440
gcttcatttt	agtcacagatt	tttagtctgy	ctgcaacctaa	cttatgcctc	gottattttag	1500
cccgagatct	ggtctttttt	tttttttttt	tttttccgtc	tcaccaange	tttatctgtc	1560
ttgaetlllt	aaawaagttt	gggggcagat	tctgaallgg	ctaaaagaca	tgcalttltta	1620
aaactagcaa	ctcttalttc	tttcttttaa	aaalacatag	catcaatctc	caaatcctat	1680
ttaaagaool	gacagcttga	gaaggctcct	actgcatttc	tcaggacctc	tggttggttct	1740
gclgttacgt	ttgaagltctg	acaactcctg	agaactcttg	catgcagagg	aggttaagagg	1800
tattggatlt	tcacagagga	agaacacagc	gcagaatgaa	gggccaggct	tactgagctg	1860
tcagtgagg	gcctcattgg	tgggcacatg	aaaagaaggc	agcctaggcc	ctggggagcc	1920
cagtcacttg	agcaagcaag	ggactgagtg	agccttttgc	aggaaaagge	taagaaaaag	1980
gaaaaccatt	ctaaaacaca	acaagaaact	gtccaaatgc	tttgggaact	gtgtttattg	2040
cctataatgg	gtcccccata	tgggtaacct	agacttcaga	gagaatgagc	agagagcaaa	2100
ggagaatctc	ggctgtcctt	ccattttcat	totgttatct	cagggtgagc	ggtagagggg	2160
agacattaga	aaaaaatgaa	acaacaaaac	aattactaat	gaggtacgct	gaggcctggg	2220
agtctcttga	ctccactact	taatttcggt	tagtgagaaa	cctttcaatt	ttcttttatt	2280
agaagggcca	gcttactgtt	ggtggcaaaa	ttgccaacat	aagttaatag	aaagttggcc	2340
aatttcaccc	cattttctgt	ggtttgggct	ccacattgca	atgttcaatg	ccacgtgctg	2400
ctgacaccca	ccggagtact	agccagcaca	aaagggcagg	tagcctgaat	tgctttctgc	2460
tctttacatt	tcttttaaaa	taagcattta	gtgtctcagtc	cctactgagt	actctttctc	2520
tccctctctc	tgaatttaut	tctttcactc	tgcattttgc	aaggatlaca	catttcactg	2580
tgtgttatat	tgtgttgcaa	aaaaaaaaaa	aagtgtoltt	gttttaaat	acttggtttg	2640
tgaatccatc	tlgclttttc	cccatlggaa	ctagltcatta	ccccatctct	gaactggtag	2700
aaaaacalct	gaagagctag	totatcagca	tctgacaggt	gaaltggatg	gtlctcagaa	2760
ccatttcacc	cagacagcct	gtttctatcc	tgtttaataa	attagtttgg	gttctctaca	2820
tgcatacaaa	accctgctcc	aatctgtcac	ataaaagtct	gtgacttgaa	gtllagttag	2880
cacccccacc	aaactttatt	ttcttatgtg	ttttttgcaa	catatgagtg	ttttgaaaaa	2940
aaagkaccca	tgtctttcatt	agaaaaaaaa	aaaaaaaaaa	aaaa		2984

&lt;210&gt; 336

&lt;211&gt; 147

&lt;212&gt; PRT

&lt;213&gt; Homo sapien

&lt;400&gt; 336

Pro S r Phe Pro Thr Leu Leu Ser Arg Arg His Leu Gly Ser Tyr Leu

102

1                      5                      10                      15  
 Leu Asp Ser Glu Asn Thr Ser Gly Ala Leu Pro Arg Leu Pro Gln Thr  
                     20                      25                      30  
 Pro Lys Gln Pro Gln Lys Arg Ser Arg Ala Ala Phe Ser His Thr Gln  
                     35                      40                      45  
 Val Ile Glu Leu Glu Arg Lys Phe Ser His Gln Lys Tyr Leu Ser Ala  
                     50                      55                      60  
 Pro Glu Arg Ala His Leu Ala Lys Asn Leu Lys Leu Thr Glu Thr Gln  
                     65                      70                      75                      80  
 Val Lys Ile Trp Phe Gln Asn Arg Arg Tyr Lys Thr Lys Arg Lys Gln  
                     85                      90                      95  
 Leu Ser Ser Glu Leu Gly Asp Leu Glu Lys His Ser Ser Leu Pro Ala  
                     100                      105                      110  
 Leu Lys Glu Glu Ala Phe Ser Arg Ala Ser Leu Val Ser Val Tyr Asn  
                     115                      120                      125  
 Ser Tyr Pro Tyr Tyr Pro Tyr Leu Tyr Cys Val Gly Ser Trp Ser Pro  
                     130                      135                      140  
 Ala Phe Trp  
 145

<210> 337  
 <211> 9  
 <212> PRT  
 <213> Homo sapien

<400> 337  
 Ala Leu Thr Gly Phe Thr Phe Ser Ala  
 1                      5

<210> 338  
 <211> 9  
 <212> PRT  
 <213> Homo sapien

<400> 338  
 Leu Leu Ala Asn Asp Leu Met Leu Ile  
 1                      5

<210> 339  
 <211> 318  
 <212> PRT  
 <213> Homo sapien

<400> 339  
 Met Val Glu Leu Met Phe Pro Leu Leu Leu Leu Leu Leu Pro Phe Leu  
 1                      5                      10                      15  
 Leu Tyr Met Ala Ala Pro Gln Ile Arg Lys Met Leu Ser Ser Gly Val  
                     20                      25                      30  
 Cys Thr Ser Thr Val Gln Leu Pro Gly Lys Val Val Val Val Thr Gly  
                     35                      40                      45  
 Ala Asn Thr Gly Ile Gly Lys Glu Thr Ala Lys Glu Leu Ala Gln Arg  
                     50                      55                      60  
 Gly Ala Arg Val Tyr Leu Ala Cys Arg Asp Val Glu Lys Gly Glu Leu  
                     65                      70                      75                      80  
 Val Ala Lys Glu Ile Gln Thr Thr Thr Gly Asn Gln Gln Val Leu Val  
                     85                      90                      95  
 Arg Lys Leu Asp Leu Ser Asp Thr Lys Ser Ile Arg Ala Phe Ala Lys  
                     100                      105                      110  
 Gly Phe Leu Ala Glu Glu Lys His Leu His Val Leu Ile Asn Asn Ala  
                     115                      120                      125  
 Gly Val Met Met Cys Pro Tyr Ser Lys Thr Ala Asp Gly Phe Glu Met

130	135	140
His Ile Gly Val Asn	His Leu Gly	His Phe Leu Leu Thr His Leu Leu
145	150	155
Leu Glu Lys Leu Lys	Glu Ser Ala Pro Ser Arg	Ile Val Asn Val Ser
165	170	175
Ser Leu Ala His	His Leu Gly Arg	Ile His Phe His Asn Leu Glu Gly
180	185	190
Glu Lys Phe Tyr Asn	Ala Gly Leu Ala Tyr Cys	His Ser Lys Leu Ala
195	200	205
Asn Ile Leu Phe Thr	Gln Glu Leu Ala Arg Arg	Leu Lys Gly Ser Gly
210	215	220
Val Thr Thr Tyr Ser	Val His Pro Gly Thr	Val Gln Ser Glu Leu Val
225	230	235
Arg His Ser Ser	Phe Met Arg Trp Met Trp	Trp Leu Phe Ser Phe Phe
245	250	255
Ile Lys Thr Pro	Gln Gln Gly Ala Gln Thr	Ser Leu His Cys Ala Leu
260	265	270
Thr Glu Gly Leu	Glu Ile Leu Ser Gly Asn	His Phe Ser Asp Cys His
275	280	285
Val Ala Trp Val	Ser Ala Gln Ala Arg Asn	Glu Thr Ile Ala Arg Arg
290	295	300
Leu Trp Asp Val	Ser Cys Asp Leu Leu Gly	Leu Pro Ile Asp
305	310	315

<210> 340  
 <211> 483  
 <212> DNA  
 <213> Homo sapien

<400> 340	
gccgaggtct gcttcacac gaggagacacg agactgttct ctaagggtct cctgctgct	60
tggeacttgg tggagggcgc tgtttagtctg gctgttttca gagggtctt tggaggagac	120
ctcttcttgc aggttggagt gtttttattc ctggcgggag accgcaratt cactgtctga	180
ggttgtgggg gcgatttata aggcagtgat aaacataaga tgtcatttcc ttgactccgg	240
cttcaattt tctctttggc tgacgacgga gtccgtgggtg tcccgatgta actgacctct	300
gctccaaacg tgacatcact gatgtctctc tgggggtgct tgatggcccg cttggtcacc	360
tgctcaattc cggcatttga ctcttgcctcc aaactgtatg aagacacctg actgcacgtt	420
ttttctgggc ttccagaatt taaagtgaag ggcagcactc ctaagctccg actccgatgc	480
ctg	483

<210> 341  
 <211> 344  
 <212> DNA  
 <213> Homo sapien

<400> 341	
ctgtctgtga gtcacagatt tctttatata taactctcct agggaaasta cactgaatgc	60
tatttltact aacctttcta llttlaalaga aatagctgag agtttctaaa ccaactctct	120
gctgccttac aaglatkaaa tattttactt ctttccataa agagttagctc aaatatgca	180
attaalittaa caattttctga tgatggtttt atctgcagta atatgtatat catctattag	240
aatttactta atgaasact gasgagasca aaatttgtaa ccaactagcac ttaagtactc	300
ctgaalctta acattgtctt taatgaccac aagacaacca acag	344

<210> 342  
 <211> 592  
 <212> DNA  
 <213> Homo sapien

<400> 342	
acagcaaaaa agaaactgag aagcccaaty tgctttcttg ttaacatcca ottatccaac	60
caatgtggaa acttcttata ctgggttcca ttatgaagtt ggacaattgc tgcatacaca	120
cctggcaggt aaaccaatgc caagagagtg atggaaacca ttggcaagac tttgttgatg	180

accaggattg	gaattttata	aaaatattgt	tgatgggaag	tigctaaagg	gtgaattact	240
tccctcagaa	gagtgtaaag	aaaagtcaga	gatgctataa	tagcagctat	ttaattggc	300
aagtgccact	gtggaaagag	ttcctgtgtg	tgctgaagtt	ctgaaggga	gtcaaattca	360
tcagcatggg	ctgtttgggt	caaatgcaaa	agcacaggtc	cttttagcat	gctgggtctt	420
cccggtgctt	tatgcaata	atcgtcttct	tctaaatttc	tcctaggctt	cattttccaa	480
agttctcttt	gggttgtgat	gtttttctgt	ctttccatta	attctataaa	atagtattgg	540
ttcagccaac	cactcttctg	cttagcttga	cgtgagttct	cggctgcgcg	tg	592

&lt;210&gt; 343

&lt;211&gt; 382

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 343

ttcttgacct	cctctctctt	caagctcaaa	caacccctcc	cttattcagg	accggcaactt	60
cttaattggt	gtggctttct	ctcagcctc	tcttaggggg	ggtaattggg	gagttggcat	120
cttgtaactc	tcctttctcc	ttctctccc	ttctctgcc	cgcctttccc	atcctgctgt	180
agucttcttg	attgtcagtc	tgtgtccat	ccagtgtatt	ttttgggttc	tgttcccttt	240
ctgactgccc	aaaggggtca	gaaccccagc	aatcccttcc	tttcactacc	ttcttttttg	300
ggggtagctg	gaggggactg	aaattgtggg	gggaaggtag	gaggcacatc	aataaagagg	360
aaacccacca	gctgaaaaaa	aa				382

&lt;210&gt; 344

&lt;211&gt; 536

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 344

ctgggacctg	agctgtaggg	taaatacagag	gcaggctttct	gagtgatgag	agloctgaga	60
caataggcca	cataaacttg	gctggatgga	acctcacat	aaggkggta	cctcttggtt	120
gtttaggggg	atgccaaggg	taaggccagc	tcagtttatat	gaagagaagc	agaacaaaca	180
agtctttcag	agaaalggal	gcaatcagag	tgggatcccg	gtcacatcaa	ggtcacactc	240
caacttcatg	tacctgcatg	gttgccaggt	cagaaaaatc	caccccttac	gagtgcggt	300
tcgaccctat	atcccccgcc	cgggtccctt	tctccataaa	attcttctta	gtagctatta	360
coltcttalt	atttgatcta	gaaattgccc	tccttttaac	cctaccatga	gocctacaaa	420
caactaaact	gccactaata	gttatgtcat	ccctcttatt	aatcatcatc	ctagccctaa	480
gtctggccta	tgagtgaact	caaaaaggat	tagactgagc	cgaataacaa	aaaaaa	536

&lt;210&gt; 345

&lt;211&gt; 251

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 345

accttttgag	gtctctctca	ccacctccac	agccacccgc	accgtgggat	gtgctggatg	60
tgaatgaagc	ccccatcttt	gtgcclccctg	aaaagagagt	ggaagtgtcc	gaggactttg	120
gctgtgggca	ggaaalcaaa	tcclacactg	cccaggagcc	agacacattt	atggaacaga	180
aaataacata	lccgakttgg	agagacactg	ccaactggct	ggagattaat	ccggacactg	240
gtgcactttc	c					251

&lt;210&gt; 346

&lt;211&gt; 282

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(282)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 346

cgcgtctctg	acaactgtgat	catgacaggg	gttcaaacag	aaagtgcctg	ggccctcctt	60
------------	-------------	------------	------------	------------	------------	----

ctaagtcttg	ttacc00000	aagg00000	aaaagatctt	ctcagttaca	aattctggga	120
agggagacta	tacctggctc	ttgccc0000	tgagaggctc	tccctccgc	ac000000	180
agaaaggctt	tctatttcac	tgcccaggt	agggggaagg	agagtaactt	tgagctctgt	240
ggtctcattt	cccagggtgc	cttcaatgct	cat00000	aa		282

&lt;210&gt; 347

&lt;211&gt; 201

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; misc feature

&lt;222&gt; (1)...(201)

&lt;223&gt; n = A, T, C or G

&lt;400&gt; 347

ac000000	tattataaaa	tgccatctaa	ttggaaggag	ctttctatca	ttgcaagtca	60
ta000000	tttta0000	ntactancag	cttttaccta	ngctcctaaa	tgcttgtaaa	120
tctgagactg	actggaccca	cccagaccca	gggcaagat	acatgttacc	atatcatctt	180
tataaagaat	ttttttttgt	c				201

&lt;210&gt; 348

&lt;211&gt; 251

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 348

ctgttaatca	ccacatttgt	gcctcacttg	tgccaagtga	gaaaatgttc	taaaatcaca	60
agagagaa00	gtggcagaat	gaaactgacc	ctaagtccca	ggtgcccctg	ggcaggcaga	120
aggagacact	cccagcatgg	aggagggttt	atcttttcat	cctagggtcag	gtctacaatg	180
ggggaagggt	ttattataga	actcccaaca	gcccacctca	ctcctgcccac	cccccagatg	240
gcccctgccc	c					251

&lt;210&gt; 349

&lt;211&gt; 251

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 349

taaa000000	gccattt000	tgtatctttg	aaggta0000	atatatggga	gctggatcac	60
aa00000000	gatg000000	ctatgggtcc	agaacatggt	gtggtattat	caacagagtt	120
cagaaggggt	tcagctctac	gtgttaccag	agaacataat	gcaattcatg	cattccactt	180
agcaattttg	taaaatacca	gaaacagacc	ccaagagtct	ttcaagatga	ggaaaattca	240
actcctgggt	t					251

&lt;210&gt; 350

&lt;211&gt; 908

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 350

ctggacactt	tg00000000	ttt0000000	gtgctgctg	cccgctcatgc	tactcatcgt	60
agcc000000	gtgaagctcg	ctgcttcc00	tac0000000	agt0000000	aa00000000	120
cggttgg000	tgtctgtgtt	atgatgacag	ag00000000	ctcttctctt	gtgacaccaa	180
ca00000000	tttgatgggg	aatgttlaag	aattggagac	ac1gtgactt	g000000000	240
gttcaagtgc	aacaatgact	atgt000000	gtg0000000	aatgggg000	g000000000	300
tgagtgttac	ctg0000000	ctgcatgcaa	acagc00000	gagat00000	tggtgtcaga	360
aggatcatgt	gcccaggtcc	atgaa00000	tgga000000	agtcaaaagg	agacatccac	420
ctgtgatatt	tgc0000000	gtgcag0000	tgacgaagat	gcccagggatg	tctggtgtgt	480
gtgtaatatt	ga00000000	aa00000000	caatcc0000	tg00000000	atgggaaatc	540
ttatgata00	gc00000000	tca0000000	atcgtgtcag	aaacaggaga	aaattgaagt	600
catgtctttg	ggtc000000	aag0000000	aactacaact	actaagtctg	aagatgggca	660

ttatgcaaga	acagattatg	cagaguantgc	taacaaatta	gaggaagtg	ccagagaaca	720
ccacatacct	tgcccggaac	attacaatgg	cttctgcag	catgggaagl	gtgagcattc	780
tatcaatag	caggagccat	cttgcaggtg	tgatgctggt	tatactggac	aaactcttga	840
aaaaaggac	tacagtgttc	tatacgttgt	tcccgttct	gtacgatttc	agtatgtctt	900
aatcgacg						908

<210> 351  
 <211> 472  
 <212> DNA  
 <213> Homo sapien

<400> 351						
ccagttattt	gcaagtgtga	agagcctatt	taccataaast	aatactaaga	accaactcaa	60
gtcaaaacct	aatgcccttg	ttattgtgaa	ttaggattaa	gtagtaattt	tcaaaattca	120
catttaacttg	attttanaast	cagwtittgy	agtcattttac	cacaagctaa	atgtgtacac	180
tatgetaaaa	acaaccattg	tattcctgtt	tttctaaaca	gtcctaattt	ctaacactgt	240
atatactctt	cgacatcaat	gaactttgtt	ttcttttact	ccagtaataa	agtaggcaca	300
gatctgtcca	caacaaactt	gcctctctat	gccttgcttc	tcaccatgct	ctgctccagg	360
tcagccccct	tttgccctgt	ttgttttgtc	aaaaacctaa	tttgcctctt	gtttttcttg	420
gtaatatata	tttaggggaag	atgttgcttt	gcccacacac	gaagcaaaagt	aa	472

<210> 352  
 <211> 251  
 <212> DNA  
 <213> Homo sapien

<400> 352						
ctcaaaagcta	atctctcggg	aatacaacaa	gaaaaggaca	aggaattctag	gcattggtgg	60
tgtggataag	gccaggtcaa	tggtgcagag	catgcagaga	aagaggtaca	tgggagcgtg	120
caggctgctg	tccgtcctta	ngalgaagac	cagcatgcag	tttccaaaca	ttgccactac	180
atcacatgaa	aggagggggg	agccaaccca	gaaatgggct	ttctctaata	ctgggatacc	240
aataagcaca	a					251

<210> 353  
 <211> 436  
 <212> DNA  
 <213> Homo sapien

<400> 353						
tttttttttt	tttttttttt	ttttttacaa	caatgcagtc	atttatttat	tgagtatgtg	60
cacattatgg	tattattact	atactgatta	tatttatcat	gtgacttota	atlaraaaat	120
gtatccaaa	gcaaaacagc	agatatataa	aalcaagag	acagaagata	gacattaaac	180
gataaggcaa	cttatacatt	gacaaacca	atccaatata	tttaaaactt	tgggaalga	240
gggggacaaa	tggaagccar	atcaaatctg	tgtaaaacta	ttcaqlatgt	ttcctttgct	300
tcatgtctga	raaggcctc	cottcaatgg	ggatgacaaa	clccaaatgc	cacacaaatg	360
ttaaacgaat	actagattca	cactgggaacg	ggggtaaaqa	agaaattatc	ttctataaaa	420
gggctcctaa	tgtagt					436

<210> 354  
 <211> 854  
 <212> DNA  
 <213> Homo sapien

<400> 354						
ccttttctag	ttcaccagtt	ttctgcaagg	atgctgggta	gggagtgtct	gcaggaggag	60
caagtctgaa	accaaatcta	ggaaacatag	gaaacgagcb	aggcacaggg	ctggtyggcc	120
atcagggaac	accctttggg	ttgatatttt	gcttaactctg	catcttttga	gtaagatcat	180
ctggcagtag	aagctgttct	ccaggtacat	ttctctagct	catgtacaaa	aaactcctga	240
aggactttgt	caggtgctct	gctaaaagcc	agatgcgttc	ggcacttctt	tggtctgagg	300
ttaattgcac	acctacaggc	actgggcctc	tgctttcaag	tattttgtcc	tcacttttagg	360
gtgagtgaag	gatccccatt	ataggagcac	ttgggagaga	tcataataaa	gctgactctt	420
gagtacatgc	agtaatgggg	tagatutgtg	tggtgtgtct	tcattcctgc	aagggtgctt	480



107

gttagggagt	gtttccagga	ggaacaagtc	tgaaccat	catgaaata	atggtaggtg	540
tgaactggaa	aactaattca	aaagagagat	cgtgatata	gtgtggttg	tacaccttgg	600
caatatggaa	ggctctaat	tgcocatatt	tgaataata	atcagcttt	ttgtsataca	660
aaataacaaa	ggattgagaa	tcatgggtgc	taatgtata	aaagaccagg	aaacataaant	720
atatcaactg	cataaatgta	aaatgcatgt	gacccaagaa	ggccccaasg	tggcagacaa	780
cattgtaccc	attttccctt	ccaaaatgtg	agcggcgggc	ctgctgcttt	caaggctgtc	840
acabgggatg	tcag					854

<210> 355  
 <211> 676  
 <212> DNA  
 <213> Homo sapien

<400> 355						
gaaattaagt	atgagctaaa	ttccctgtta	aaacctotag	gggtgacaga	tctcttcaao	60
caggtaaaag	ctgatettte	tggatgtca	ccaaccaagg	gcctatatit	atcaaaagcc	120
atccacaaat	catccctgga	tgtcagcgaa	gagggcacgg	aggcagcagc	agccactggg	180
gacagcatcg	ctgtaaaauag	cttaccatg	agagctcagt	tcaaggcgaa	ccaccccttc	240
ctgttcttta	taaggacac	tcataccaac	acgatcttat	tctgtggcaa	gcttgccctc	300
ccctaataca	atgggggttg	gtaaggctca	gagttgcaga	tgaggtgcag	agacaatctt	360
gtgactttcc	caaggccaaa	aaagctgtca	caactcaagc	acctctgtgc	ctcagtttgc	420
tcatctgcaa	aataggtcta	ggatttcttc	caaccatttc	atgagttgtg	aaagtaaggg	480
tttgtaatac	atggasaaaag	gtagacttat	gcagaaagcc	tttttggttt	tcttatctgt	540
ggtgtctcat	ttgagtgctg	tccagtgaca	tgtcaagtc	aalyagtaaa	attttaaggg	600
attagatttt	cttgacttgt	atgtatctgt	gagatcttga	ataagtgacc	tgaatctctt	660
gcttaaaagaa	aaccag					676

<210> 356  
 <211> 574  
 <212> DNA  
 <213> Homo sapien

<400> 356						
tctttttttt	tttttccagga	aaacattctc	ttactttatt	tgcattctcag	caaaggttct	60
catgtggcac	ctgactggca	tcaaaccaaa	gttcgttaggc	caacaaagat	gggccaactca	120
caagcttccc	atttgttagat	ctcagtgccg	atgagttctt	gacacctgtt	ccctctcttca	180
gtctcttagg	gagggctaaa	tctgtctcag	gtgtgctaaq	agtgcacagcc	caaggkpggtc	240
aaaagtcac	aaaactgcag	tctttgctgg	gtagtaagc	caagaggtgc	ctggacagca	300
gagttctttt	cttgggcaac	agataaccag	acaggactct	aatcgtgctc	ttcttcaaca	360
ttcttctgtc	tctgcctaga	ctggaataaa	aagccaatct	ctctcgtggc	acaggaaggg	420
agatacaagc	togtttaccat	gtgatagatc	taacaaaggc	atctaccgaa	gtctggtctg	480
gatagacggc	acagggagct	cttaggtcag	cgtgctggt	tggaggacat	tctgagctcc	540
agctttgcag	ccctttgtga	acagttactt	cccc			574

<210> 357  
 <211> 393  
 <212> DNA  
 <213> Homo sapien

<400> 357						
tttttttttt	tttttttttt	tttttttttt	tacagantat	aratgcttta	tcaactgact	60
taatattgkg	kttgttccac	tatacttcaa	aatgcaccac	tontaaatat	ttaattcagc	120
aagccacaac	caaracttga	ttttatcaac	aaaaaacctt	aatutaaac	ggsaaaaaag	180
atagatataa	ttactccagt	tttttttaaa	cttaaaatct	attccattgc	cgaattaaara	240
araarataag	tgttatatgg	aaagaagggc	alicaagccac	actnaaraaa	cctgaggkaa	300
gcataatctg	tacaaaatta	aactgtctct	tttggccttt	tacaaaattt	gcaacgktot	360
ttttttcttt	ttttgttttt	tttttttttt	tac			393

<210> 358  
 <211> 630  
 <212> DNA  
 <213> Homo sapien

&lt;400&gt; 358

acagggtaaa	caggaggatc	cttgcctctca	cggagctttac	attctagcag	gaggacata	60
ttastgttta	taggaataatg	atgagtttat	gacaaaggaa	gtagatagt	ttttacaaga	120
gcataagatg	gggagctaa	tccagcacag	ggaggtcaca	gagacatccc	taaggaagt	180
gagtttaaac	tggagagagc	aagtgcctaa	actgaaggat	gtgttgaa	agaaggga	240
gtagaacaa	ttgggcagag	ggaaaccttat	agacctaa	gtgggaagg	tcaaagaact	300
gaaagagagc	tagaacagct	ggagccgttc	tccggtgtaa	agaggagtca	aagagataag	360
attaaagatg	tgaagattaa	gatcttgggt	gcattcagg	attggcactt	ctacaagaaa	420
tcactgaagg	gagtaatgtg	acattacttt	tcacttcagg	atggccattc	taactccagg	480
gggtagactg	gactaggtaa	gactggaggc	aggtagacct	cttctaaggc	ctgcgtagt	540
gaaagacaaa	aataagtggg	gaaattcagg	ggatagtga	aatcagtagg	acttaatgag	600
caagccagag	gttccctccac	aacaaccagt				630

&lt;210&gt; 359

&lt;211&gt; 620

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 359

acagcattcc	aaaatataca	tctagagact	aarrgtaaat	gctctatagt	gaagaagtaa	60
taattaaaa	atgctactaa	tatagaaaat	ttataatcag	aaaaataaat	attcaggggag	120
ctcaccagaa	gaataaagt	ctctgccagt	tattaaagga	ttactgctgg	tgaattaaat	180
alggcattcc	ccaaaggaaa	tagagagall	cttctggatt	algttcaata	tttatttccac	240
aggaftaaat	gttttaggaa	caqatataaa	gcttggccac	qgaagagatg	gacaaagcac	300
aaagacaaac	tgtatccctta	ggaagcaaac	ctaccctttc	agggcataaaa	tttggagaaa	360
tgcaacatta	tgcttccctga	ataaklatgt	gaaagaaagt	ctgatgaaa	tgacatccct	420
aattgtasgat	aactttataa	gaattctggg	tcaaataaaa	ctctttgaag	aaacatcca	480
aattgtcattg	acttatcaaa	tactatcttg	gcataatacc	tatgaaggca	aaactaasca	540
aacaaaaagc	tcacacaaaa	caaaaccatc	aacttatitt	gtattctata	acatacagga	600
ctgtaaagat	gtgacagtgt					620

&lt;210&gt; 360

&lt;211&gt; 431

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 360

aaaaaa	agccagaaac	acatgtgata	gataatata	ttgggtgcac	acttccagac	60
lqatgaatga	tgaacgtgat	ggactattgl	atggagacaa	tcttcagcaa	gagggggaaa	120
tactcatcat	ttttggccag	cagttgtttg	atcaccaaac	atcatgccag	aatactcagc	180
aaaccttctt	agctcttgag	aagtcaaaat	cgggggggat	ttattcctgg	caattttaat	240
tggaactcct	atgtgagagc	agcggctacc	cagctggggg	ggtggagcga	acccgtcact	300
agtggacatg	cagtggcaga	gctcctggta	accaactaga	ggaatacaca	ggcacatgtg	360
tgatgccaaag	ogtgacacct	gtagcactca	aatttgtctt	gtttttgtct	ttcgggtgtg	420
agatttcttag	t					431

&lt;210&gt; 361

&lt;211&gt; 351

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 361

acactgattt	cggatcaaaa	gaatcatcat	ctttaccttg	acttttccag	gaattactga	60
acttttctct	cagaagatag	ggcacagcca	ttgacttggc	ctcacttgaa	gggtctgcat	120
ttgggtctct	tggtctcttg	ccaggtttcc	cagccactcg	agggagaaat	atcggggagt	180
ttgaactcct	ccggaggttt	ccggaggggt	tcacagtgag	ccctggggcc	ctcagggctg	240
caatcttgga	ttcaatgtcl	gaaacctogo	tcctctgctg	ctggacttct	qaggccgtca	300
ctgcaactct	gtcctccaga	cttgaacagt	ctcctatclgt	ggctctgttg	t	351

&lt;210&gt; 362

&lt;211&gt; 463

<212> DNA  
<213> Homo sapien

<400> 362  
acttcacag gccataatgg gtgcctcccg tgagaatcca agcacctttg gactgcgcga 60  
tgtagatgag ccggtgaag atcttgcgca tgcgggctt cagggcgaag ttcttggcgc 120  
ccccgggtcac agaatgacc aggttgggtg ttttcagggt ccagtgttg gtcagcagct 180  
cgtaagggt ttcgcgtcc gtgtcgagg acagacgtat atacttccct ttcttcccca 240  
gtgtctcaca ctgaatatcc ccaaaaggcg cggtaggaaa ttcttgggtg tgtttcttgt 300  
agttccattt ctcaatttgg ttgatctggg tgccctccat gtgctggctc tgggcatagc 360  
cacacttgca cacattctcc ctgataagca cgatggtgtg gacaggaagg aaggatttca 420  
ttgagcctgc ttatggaaac tggatattgt agcttaata gac 463

<210> 363  
<211> 653  
<212> DNA  
<213> Homo sapien

<220>  
<221> misc feature  
<222> (1) . . . [653]  
<223> n = A, T, C or G

<400> 363  
accccagagl nccctgctgq cctactgnga acgaccaacg acacacccaa gctcggcctc 60  
ctcttggnga ttctgggtga cctcttcatt aatggcaacc gtgccagwga ggctgtctc 120  
tgggagggcag tacgcaagat gggactgcgt cctgggggtga gacatccctt ccttggagat 180  
ctaacgaaac ttctcaccta tgagttgtaa agcagaaata cctgnactac agacgagtg 240  
ccaacagcaa ccccccggaa gtatgagttc ctctrgggcc tccgttccca ccatgagasc 300  
tagcaagatg naagtgttga gantcattgc agaggttcag aaaagagacc cntcgtgact 360  
ggctctgcaca gttcatggag gctgcagatg aggccttggg tgcctctggat gctgctgcag 420  
ctgagggcga agcccgggct gaagcaagaa cccgcatggg aattggagat gaggclgtgt 480  
ntgggcccctg gagctgggat gacattgagt llaagclgct gacctgggat gagggaagg 540  
atcttggaga tccntggtcc agaattccat ttcccttctg ggcacagatc caccagaatg 600  
cccgtccag attccctcag acctttgccc glocallat. tggctcctggt qgt 653

<210> 364  
<211> 401  
<212> DNA  
<213> Homo sapien

<400> 364  
actagaggaa agacgttaaa ccactctact accacttgtg gaactctcaa agggtaaatg 60  
acaaagccaa tgaatgactc taaaaacaat atttacattt aatggtttgt agacaataaa 120  
aaaacaagggt ggatagatct agaattgtaa cattttaaga aaaccatagc atttgacaga 180  
tgagaaagct caattataga tgcaaaagta taactaaact uctatagtag taaagaanta 240  
catttcacac ccttcataata aattcactat ctgggcttga ggcactccat aaaaatgtatc 300  
acgtgcatag taaatcttta tatttgcctat ggcgttgcac tagaggactt ggaactgcac 360  
aagtggatgc ggggaantg aatctcttcl ccatagacca g 401

<210> 365  
<211> 356  
<212> DNA  
<213> Homo sapien

<400> 365  
ccagtgtcat atttgggctt aaaaatttcaa gaagggcact tcaaatggct ttgcatttgc 60  
atgtttcagl gctagagcgt aggaatagac cctggcgctc actgtgagat gttcttcagc 120  
tccagagca tcaagtctct gcagcaggtc attcttgggt aaagaaatga cttccacaaa 180  
ctctccatcc cctggttttg gcttcggcct tgggttttcg gcatcatctc cgttaaatgg 240  
gactgtcagc atgtgtatag tacagtttga caagcctggg tccatacaga ccgctggaga 300  
acattcggca atgtccctt tgtagccagt ttcttcttcg agctcccgga gagcag 356

110

<210> 366  
 <211> 1851  
 <212> DNA  
 <213> Homo sapien

<400> 366  
 tcataccaat tgcacgacgc ggcacccgtta gtragggtttt ctgggaatcc cscatgagta 60  
 cttccgtgtt cttcatttct cttcaatagc cataaatctt ctactctctg ctggctgttt 120  
 tcaacttctt taagcccttg tgcctctctc tctgatgtca gctttaagtc ttgttctgga 180  
 ttgtgtttt cagaaagagat ttttaacatc tgtttttctt tgtagtcaaa aagtaactgg 240  
 caaattacat gatgatgact agaaacagca tactctctgg cagtcttctc agatcttgag 300  
 aagatacatc aacattttgc tcaagttagg ggctgactat acttgctgat ccacaacata 360  
 cagcaagtat gagagcagtt cttccatata tatccagcgc atttaaatte gcttttttct 420  
 tgattaaaaa ttccaccact tgcgtttttt gctcatgtat accaagttag agtgggtgga 480  
 ggccatgctt gttttttgat tccatatacag caccgtataa gagcagtgct ttggccatta 540  
 atttatcttc atgttagaca gcatagtgtg gagtggatt tccatactca tctggaatat 600  
 ttgtatcagt gcatgttctc agcaacatta acgcacatte atcttctgga cattgtacgg 660  
 cttttgtcag agctgtcttc tttttgttgt caaggacatt aagttgacat cgtctgtcca 720  
 gacagagttt tactacttct gaattcccat tggcagaggg cagatgtaga gcagtctctt 780  
 tttgcttgct cctcttggtc acatccgtgt ccttgaguat gacgatgaga tccctttctg 840  
 ggaacttacc ccaccaggga gctctgtgga gcttgctccag atcttctcca tggacgtggt 900  
 acctgggata catgaaaggg cgtctctcgt aglctcccca agcgaccacg ttgctcttgc 960  
 cgttcccttg cagcagggga agcagtgcca gcaccactt cactcttgc tcccaagcgt 1020  
 cttcacagag gagtcttgtt ggtctccaga agtgccacag ttgctcttgc cgtctccctt 1080  
 gtcnatccag ggaggaagaa atgcagggaa tgaagagtg atgcagctg gtatctctct 1140  
 cagccatcaa acttctggac agcaggtcac tccagcaag gtggaggaag ctgtccaccc 1200  
 acagaggatg agatccagaa accacaatat ccattccaa acaaacactt ttcagccaga 1260  
 cacaggtact gaaatcatgt catctgcggc aacatgggtg aacctaccca atcacacatc 1320  
 aagagatgaa gacactgcag tatatctgca caacgtaata ctcttcatcc ataacaaaat 1380  
 aatataattt tctcttgagg ccatatggat gaactatgaa ggaagaactc cccgaagaag 1440  
 ccagtgcgag agaagccaca ctgaagctct gtctcagcc atcagcgcca oggacaggat 1500  
 tgtgtttctt cccagtgat gcagcctcaa gttatccga agctgcgcca gcacacgggtg 1560  
 gctctgaga aacaccccag ctcttccggt ctacacaggg caagtcaata aatgtgataa 1620  
 tcacataaac agaattuaaa gcaagtcac ataugcatct ataugcatct caacagacac agaaaaggca 1680  
 tttgacaaaa tccagctcc lltatcttat tgttgcaatt ctccagaggaa atgcttctaa 1740  
 ctttccccc tttglatte tgttggtctg ggtctgtc taaggtggtt ttattactt 1800  
 aaggtatgtc cttctatgc ctgttttgtt gagggtttca attctcgtgc 1851

<210> 367  
 <211> 668  
 <212> DNA  
 <213> Homo sapien

<400> 367  
 cttgagcttc caaataygga agactggccc ttacacaggt caatgttaaa atgaatgcat 60  
 ttcagtattt tgagataaa attrgtagat ctataccttg ttttttgatt ccatatcagc 120  
 accrtataag agcagtgtt tggccattaa tttatcttct attrtagaca gortagtgya 180  
 gagtggatatt tccatactca tctggaatat ttggatcagt gccatgttcc agcaacatta 240  
 acgacacatc atcttctctg cattgtacgg cctgtcagta ttgacccaa aaacaaatta 300  
 catatcttag caattccaaa taacatlcac cagctttcac caactagtta tatttaagg 360  
 agaaaactca tttttalgc atgtattgaa atcaaaccca cctcatgctg atatagttgg 420  
 ctacacacata cttttatcag agctgtctc tttttgttgt caaggacatt aagttgacat 480  
 cgtctgtcca gcaggagttt tactacttct gaattcccat tggcagaggg cagatgtaga 540  
 gcagtcctat cagagtgaga agacttttca ggaaltgta gtgcactaga tucagccata 600  
 gcaatgatto atgtaactgc aacactgaa tagcctgela ttaactctgc ttcacaaaaa 660  
 aaaaaaaa

<210> 368  
 <211> 1512  
 <212> DNA  
 <213> Homo sapien

111

&lt;400&gt; 368

gggtcgccca	gggggsgcgt	gggttttcoo	cggttgggtg	tgggttttcc	ctgggtgggg	60
tgggtcgggc	trgaatcccc	tgtctggggtt	ggcagggtttt	ggctgggatt	gacttttytc	120
ttcaaacaga	ttggaaacccc	ggagttacot	gctagttlqgl	gaaactgggtt	ggtagacgcg	180
atctgtttgg	tactactggc	ttctcctggc	tgttaaaagc	agatggtggt	tgggttgat	240
tccatgcocg	ctgcttcttc	tgtgaagaag	ccatttggtc	tcaggagcga	gatgggcaag	300
tgggtgctgc	gttgcttccc	ctgctgcagg	gagagcgcca	agagcgaagc	gggcacttct	360
ggagaccacg	acgactctgc	tatgaagaca	ctcaggagca	agatgggcaa	gtggtgcccgc	420
cactgcttcc	colqctgcag	ggggagtggc	aagagcaacg	tgggcgcttc	tggagaccac	480
gacgaytcig	ctatgaagac	actcagggac	aagatgggca	agtggtgctg	ccactgcttc	540
ccctgctgca	gggggagcrg	caagagcaag	gtgggcgctt	ggggagacta	cgatgacagt	600
gccttcatgg	agcccaggta	ccacgtccgt	ggagaagatc	tggacaagct	ccacagagct	660
gcctggtggg	gtaaagttccc	cagaaaggat	ctcatcgcca	tgtcaggga	cactgacgtg	720
accaagaggg	acaaagcaaaa	gaggactgct	ctacatctgg	ccctcgccaa	tgggaattca	780
gaagtagtaa	aactcatgct	ggacagacga	tgtcaactta	atgtccttga	caacaaaaag	840
aggacagctc	tgayaaaggc	cgtacaatgc	caggaagatg	aatgtgcgtt	aatgttgctg	900
gaacatggca	ctgatccaaa	tattccagat	gagtatggaa	ataccaactct	rcactaygct	960
rtctayaatg	aagataaatt	aatggccaaa	gcactgctct	tatayggtgc	tgatatcgaa	1020
tcaaaaaaca	aggtatagat	ctactaattt	tatcttcaaa	atactgaaat	gcattcattt	1080
taacattgac	gtgtgtaagg	gccagtcttc	cgtattttgga	agctcaagca	taacttgaat	1140
gaaaatattt	tgaatgacc	taattatctm	agactttatt	ttaaatattg	ttattttcaa	1200
agaagcatta	gagggtacag	tttttttttt	tcaaatgcac	ttctggtaaa	tacttttgtt	1260
gaaaacactg	aattttgtaa	aggtaatact	tactattttt	caatttttcc	ctcctaggtt	1320
ttttttcccc	taattgaatgt	aagatggcaa	aattttgccc	gaatataggtt	ttacatgaaa	1380
actccaagaa	aagttaaaca	tgtttcagtg	aatagagatc	ctgctccttt	ggcaagttcc	1440
taaaaaacag	taatatgatac	gagggtgatgc	gcctgtcagt	ggcaaggttt	aagatatttc	1500
tgatctcgtg	cc					1512

&lt;210&gt; 369

&lt;211&gt; 1853

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 369

gggtcgccca	gggggagcgt	gggttttcoo	cggttgggtg	tgggttttcc	ctgggtgggg	60
tgggtcgggc	trgaatcccc	tgtctggggtt	ggcagggtttt	ggctgggatt	gacttttytc	120
ttcaaacaga	ttggaaacccc	ggagttacot	gctagttggt	gaaactgggtt	ggtagacgcg	180
atctgtttgg	tactactggc	ttctcctggc	tgttaaaagc	agatggtggt	tgggttgat	240
tccatgcocg	ctgcttcttc	tgtgaagaag	ccatttggtc	tcaggagcga	gatgggcaag	300
tgggtgctgc	gttgcttccc	ctgctgcagg	gagagcgcca	agagcgaagc	gggcacttct	360
ggagaccacg	acgactctgc	tatgaagaca	ctcaggagca	agatgggcaa	gtggtgcccgc	420
cactgcttcc	colqctgcag	ggggagtggc	aagagcaacg	tgggcgcttc	tggagaccac	480
gacgaytcig	ctatgaagac	actcagggac	aagatgggca	agtggtgctg	ccactgcttc	540
ccctgctgca	gggggagcrg	caagagcaag	gtgggcgctt	ggggagacta	cgatgacagy	600
gccttcatgg	akcccaggta	ccacgtccrt	ggagaagatc	tggacaagct	ccacagagct	660
gcctggtggg	gtaaaagtccc	cagaaaggat	ctcatcgcca	tgtcaggga	cackgaygtg	720
accaagargg	acaaagcaaaa	gaggactgct	ctacatctgg	ccctcgccaa	tgggaattca	780
gaagtagtaa	aactcatgct	ggacagacga	tgtcaactta	atgtccttga	caacaaaaag	840
aggacagctc	tgayaaaggc	cgtacaatgc	caggaagatg	aatgtgcgtt	aatgttgctg	900
gaacatggca	ctgatccaaa	tattccagat	gagtatggaa	ataccaactct	rcactaygct	960
rtctayaatg	aagataaatt	aatggccaaa	gcactgctct	tatayggtgc	tgatatcgaa	1020
tcaaaaaaca	agcatggcct	cacacactg	ytacttggtr	tacatgagca	aaaacagcaa	1080
gtagtgaat	ttttaatya	gaaaaaagcg	aatttaaaat	gcrcctggata	gatatggaag	1140
ractgctctc	atacttgcgt	tatgttgttg	atcagcaagt	atagtcagcc	ytctacttga	1200
gcaaaatrct	gatgtatctt	ctcaagatct	ggaaagacgg	ccagagagta	tgtgttltct	1260
agtcatcatc	atgtaatttg	ccagttaact	tctgactaca	aagaaaaaca	gatgttcaa	1320
atctctcttg	aaaacagcaa	tcagaacaaa	gacttaaaagc	tgacatcaga	ggaagagtcg	1380
caaaggctta	aaggagtgta	aaacagccag	ccagagggcat	ggaaactttt	aattttaaac	1440
ttttggttta	atgttttttt	tttttgccct	aataatatta	gatagtccca	aatgaatatwa	1500
cctatgagac	taggctttga	gaatcaataa	attctttttt	taagaaetctt	tgggttagga	1560
gcgggtgtctc	acgcctgtaa	ttccagcacc	ttggagagcct	gaaggtgggca	gacacagaga	1620

tcaggagatc gagaccatcc tggctaaccac ggtgaaaccc catctctact aaaaatataa	1680
aaacttagct ggggtgtggtg gcgggtgccc gtagtcccag ctactcagga rgctgaggca	1740
ggagaatggc atgaacccgg gagggtgggg ttgcagtgag ccgagatccg ccactacact	1800
ccagcctggg tgacagagca agactctgtc tcaaaaaaa aaaaaaanaa aaa	1853

<210> 370  
 <211> 2184  
 <212> DNA  
 <213> Homo sapien

<400> 370

ggcagcagaa ttasaaaccc cagcaaaaca ggcatagaag ggacatacct taaagtaata	60
aaaaccacct atgacaagcc cacagccaac ataactactaa atgggganaaa gttagaagca	120
tttcctctga gaactgcaac aataaatata aggatgctgg attttgtcaa atgccttttc	180
tgtgtctgtt gagatgotta tgtgactttg ctitttaattc tgtttatgtg attatcacat	240
ttattgactt gcoctgtgtta gaccggaaga gctgggggtgt ttctcaggag ccacoggtgtg	300
ctgcggcagc ttccgggataa cttgaggctg catcactggg gaagaaacac aytccgtgtcc	360
gtggcgctga tggctgagga cagagcttca gtgtggcttc tctgcgactg gcttctctgg	420
ggagtcttcc ctccatagtt catccatatg gctccagagg aaaattatat tattttgtta	480
tggatgaaga gtattacgtt gtgcagatat actgcagtgt ctccatctct tgatgtgtga	540
ttgggtaggf tccaccatgt tgcgcagat gacatgattt cagtacctgt gtctggctga	600
aaagtgtttg tttgtgaatg gatatttgtg ttctctggat tcatctctct tgggtggaca	660
gctttctcca ccttgcctga agtgacctgc tgtccagaag ttgatggot gaggagtata	720
ccatcgtgca tgcattcttc atttccctga ttctctctcc cctggatgga cagggggagc	780
ggcagagaca acgtgggcac ttctggagac cacaacgact cctctgtgaa gacgcttggg	840
agcaagaggt gcaagtggtg ctgcccactg tccccctgct gcaggggagc ggcaagagca	900
acgtggctcc ttgggggagc tccgalqaca ggcgcttcat ggatcccagg taaccaogtcc	960
atggagagga tclggacaag clccacagag ctgcccctgtg gggtaaaagtc cccagaaagg	1020
atctcatctg catgctcagg gacacggatg tgaacaaagc ggcacagcaa agagagactg	1080
ctctacatct ggccctctgccc aatgggaatt cagaaglagt aaaaclcglt ctggacagac	1140
gatgtcaact taatgtcctt gacaacaaaa agaggacagc tctgacaaag gccgtacaat	1200
gccaggaaga tgaatgtgog ttaatgttgc tggaaactgg caetgateca aatattccag	1260
atgagtatgg aaataccact ctacactatg ctgtctacaa tgaagataaa ttaatggcca	1320
aagcactgct ctatatacgtt gctgatatog aatcaaaaaa caagcatggc ctcacaccac	1380
tgcactctgg tatacatgag caaaaacagc aagtgggtgaa atttttaato agaaaaaag	1440
ogaattttaa tgcgctggat agatatggaa gaactgctct catacttgct gtatgttgtg	1500
gatcagcaag tatagtcagc cctctacttg agcaaaatgt tgatgtatct tctcaagatc	1560
tggaaagacg gccagagagt atgctgtttc tagtcatcat catgtatatt gccagttact	1620
ttctgactac aaagaaaaaac aggaagagtc aatctctctt gaaaaacagca atccagaaca	1680
agacttaaaag clgacatcag aggaagagtc acaaaagcct aaaggaagtg aaaaacagcca	1740
gccagagcca tggaaacttt caaatlttaa ctttttgctt aatgtttttt ttttttgcct	1800
taataatatt agatagtcac aeatgaaatw acctatgaga ctgggctttt agaalcaata	1860
gattcttttt ttaagaatct tttggctagg agcgggtgtct cagcgcctgla attccagcac	1920
cttgagagggc tgaggtgggc agatcagag atcaggagat cgagaccatc ctggctasca	1980
cggtgaiaacc ccatctctac taaaaatata aaaaacttag tgggtgtggc ggcgggtgcc	2040
tgtagtccca gctactcagg argctgaggg aggaagaatgg catgaacccg ggaggtggag	2100
gttgcaatga gccagatcc gccactacac cccagcctgg gtgacagagc aagactctgt	2160
ctcaaaaaaa aaaaaaaaaa aaaa	2184

<210> 371  
 <211> 1855  
 <212> DNA  
 <213> Homo sapien

<220>

<221> misc feature

<222> {1}.T.(1855)

<223> N = A, T, C or G

<400> 371

tgcacgcatc ggccagtgtc tgtgcaacgt acactgacgc cccctgagat gtgcacgcgc	60
caacgncacg ttgcacgcgc ggcagcgggt tggclgctt gtaacggctt gcaugcgac	120

gcgcgcgcgc	cataacgcgc	agactggcct	gtaacggcct	gcagggcgac	gcgcgcgcgc	180
cgtaacggct	tggctgcgcct	gtaacggcct	gcacgtgcac	gctgcaogcg	cgtaacgggc	240
ttggctggca	tgtagcgcct	tggcttggct	ttgcattyt	tgotkggctk	ggcggtgkty	300
tcttggattg	acgccttcc	cttggatkgc	cgtttccct	ttggatkgac	gittctytyt	360
tgcgcttcc	ttgctggact	tgacctttty	tctgctgggt	ttggcattcc	tttgggggtg	420
gctgggtgtt	ttctccgggg	gggkktgccc	ttctgggggt	gggggtgggk	cgcccccagg	480
gggggtgggc	ttcccccggg	tgggtgtggg	tttccctggg	gtgggggtggg	ctgtgctggg	540
atccccctgc	tgggggtggc	agggattqac	tttttcttc	aaacagattg	gaaacccggg	600
gtaacntgct	agttgggtgaa	actygttgg	agacgcgac	tgtggtact	actgtttctc	660
ctggctgtla	aaagcagatg	gtgctpagg	ttgattcaat	gcgggtgct	tcttctgtga	720
agaagccatt	tggctcagc	agcaagatg	gcaagtggtg	cgccactgct	tccccctg	780
cagggggagg	ggcaagaggc	acglqggcac	ttctggagac	cccaacgaat	cctctgtgaa	840
gacgcttggg	agcaagagg	gcaagtggtg	clqcccactg	cttccccctg	lqccggggag	900
cgggcaggagc	aagctggkcg	ctgggggagc	ctacgagac	agcgccctca	tggakccccc	960
gtaccacgtc	ctggggagag	atctggacaa	gctccacaga	gclgcttgg	ggggkcaagt	1020
ccccagaaag	gatctcatcg	tcattgctcag	ggacactgay	gtgacacaga	rggacaaagc	1080
aaagaggact	gctctacatc	tggcctctgc	caatgggaat	tcagaagtag	taaaactcgt	1140
gctggacaga	cgaatgtcaac	ttaatgtcct	tgacaacaaa	aagaggacag	ctctgcacaa	1200
ggcctgacaa	tggcaggag	atgaatgttc	gttaatgttg	ctggaacatg	gcactgatac	1260
aaatattcca	gatgagtatg	gaaataccac	tctacactat	gctgtctaca	atgaagataa	1320
attaatggcc	aaagcactgc	tcttatacgg	tgtgatatc	gaatcaaaaa	acaaggtata	1380
gatctactaa	ttttatcttc	aaaatactga	aatgcattca	ttttaacatt	gacgtgtgta	1440
agggccagtc	ttccgtattt	ggaagctcaa	gcataacttg	aatgaaaata	ttttgaaatg	1500
acctaattat	ctaagacttt	atttttaata	ttgttatttt	caaagaagca	ttagagggtg	1560
cagttttttt	tttttaaatg	cacttctgg	aaatactttt	gttgaaaaca	ctgaatttgt	1620
aaaaggtaat	acttactatt	tttcaatttt	tccctcctag	gatttttttc	ccctaattga	1680
tgtaagatgg	caaaattttg	cctgaaatag	gttttcatg	aaaactccaa	gaaaagttaa	1740
acatgtttca	gtgaatagag	atcctgctcc	tttggcaagt	tctanaaaaa	cagtaataga	1800
tacgaggtga	tgcgcctgct	agtggcaagg	tttaagatat	ttctgatctc	gtgcc	1855

<210> 372  
 <211> 1059  
 <212> DNA  
 <213> Homo sapien

gcaacgtggg	cacttctgga	gaccacaaag	actcctctgt	gaagacgctt	gggagcaaga	60
ggtgcaagtg	gtgctgccca	ctgcttcccc	tgtctcaggg	gagcggcaag	agcaacgttg	120
gcgcttgrgg	agactmcgat	gacagygcct	tcatggagcc	caggtaccac	gtccgtggag	180
aagatctgga	caagctccac	agagctgccc	tgggtgggta	aagtccccag	aaaggtcttc	240
atcgtaatgc	tcagggacac	tgaygtgaac	aagarggaca	agcaaaagag	gactgctcta	300
catctggcct	ctgccaatgg	gaattcagaa	gtagtaaaac	tctgtctgga	cagacgatgt	360
caacttaatg	tcttgacaa	caaaaagagg	acagctctga	yaaaggccgt	acaaatgcag	420
gaagatgaat	gtggttaat	gttgtctggc	catggcactg	atccaaatat	tccagctgan	480
tatggaaata	ccactctrc	ctaygctrtc	tayaatgaag	ataaatat	ggccaaaagc	540
ctgctcttal	ayggtgctga	lal.cqaatca	aaaaacaaag	tatagatcta	ctaattttat	600
cttcaaaata	ctgaastgca	ttcattttaa	cattgacgtg	tgtaaggggc	agtcttccgt	660
atttgggaagc	tcaagcataa	cttgaatgaa	aatattttga	aatgaccta	ttat.ctaaga	720
ctttatttta	aatattgtta	ttttcaaaaga	agcatttagag	ggtacagttt	ttttttttta	780
aatgcacttc	tggtaastac	ttttgttgaa	aacactgaat	ttgtaaaagg	taatacttac	840
tatttttcaa	tttttccctc	ctaggatttt	tttcccccaa	tgaatgtaag	atggcacaat	900
ttgccctgaa	ataggtttta	catgaaaact	ccaaagaaaag	ttaaacatgt	ttcagtgaat	960
agagatcctg	ctcctttggc	aagttcctaa	aaaacagtaa	tagatacagag	gtgatgcgc	1020
tgtcagtggc	aaggttttaag	atatttctga	tctcgtgccc			1059

<210> 373  
 <211> 1155  
 <212> DNA  
 <213> Homo sapien

<400> 373	atgggtgggtg	aggttgatc	catgcgcgt	gcctcttctg	tgaagaagcc	atttggctc	60
-----------	-------------	-----------	-----------	------------	------------	-----------	----

aggagcaaga	tgggcaagt	gtgctgcegt	tgttccct	gtgcaaggga	gagoggcaag	120
agcaacgtgg	gcacttctgg	agaccacgac	gactctgcta	tgaagacact	caggagcaag	180
atgggcaagt	ggtgcccgca	ctgcttcccc	tgtgcaagg	ggagtggcaa	gagcaacgtg	240
ggcgcttctg	gagaccacga	cgactctgct	atgaagacac	tcaggaaaca	gatgggcaag	300
tgggtgctgoc	actgcttccc	ctgctgcegg	gggagcggca	agagcaaggt	ggcgcttgg	360
gggagctacg	atgacagtgc	cttcactggag	cccaggtacc	acgtccgtgg	agaagatctg	420
gacaaqctcc	acagagctgc	ctggtggggt	aaagtcccca	gaaaggatct	catcgtcatg	480
ctcagggaca	ctgacgtgaa	caagaaggac	aaagcaaaaga	ggactgctct	acatctggcc	540
tctgceaatg	ggatttcaga	agtagtcaaa	ctcctgctgg	acagacgatg	tcaacttaac	600
gtccttgaca	acaaaaagag	gacagctctg	alaaggccg	tacaatgcca	ggaagatgaa	660
tgtgcgttaa	tgttgctggg	acatggcact	gatccaaata	ttccagatga	gtatggaaat	720
accactctgc	actacgctat	ctataatgaa	galaatlaa	tggccaaagc	actgctctta	780
catggtctg	atatcgaaat	aaaaaacaaag	ctatggcctca	caaccactgtt	acttggtgta	840
atgagcaaaa	accagcaagt	cgtgaaattt	ttaatcaaga	aaaaagcgaa	tttaaatgca	900
ctggatagat	atggaaggac	tgtctcata	cttctgtgat	gttgctgctc	agcaagtata	960
gtcagccttc	tacttgagca	aaatattgat	gtatcttctc	aaagctctatc	tggacagacg	1020
gccagagagt	atgctgtttc	tagtcatcat	catgtaattt	gccagttact	ttctgactac	1080
aaagaaaaac	agatgctaaa	aatctcttct	gaaaacagca	atccagaaaa	tgtctcaaga	1140
accagaataa	ataaa					1155

&lt;210&gt; 374

&lt;211&gt; 2000

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 374

atgggtggtg	aggttgatgc	catgcccgt	gctcttctg	tgaagaagcc	atttggctctc	60
aggagcaaga	tyggcaagtg	gtgctgcegt	tgttccct	gtgcaaggga	gagoggcaag	120
agcaacgtgg	gcacttctgg	agaccacgac	gactctgcta	tgaagacact	caggagcaag	180
atgggcaagt	ggtgcccgca	ctgcttcccc	tgtgcaagg	ggagtggcaa	gagcaacgtg	240
ggcgcttctg	gagaccacga	cgactctgct	atgaagacac	tcaggaaaca	gatgggcaag	300
tgggtgctgoc	actgcttccc	ctgctgcegg	gggagcggca	agagcaaggt	ggcgcttgg	360
gggagctacg	atgacagtgc	cttcactggag	cccaggtacc	acgtccgtgg	agaagatctg	420
gacaaqctcc	acagagctgc	ctggtggggt	aaagtcccca	gaaaggatct	catcgtcatg	480
ctcagggaca	ctgacgtgaa	caagaaggac	aaagcaaaaga	ggactgctct	acatctggcc	540
tctgceaatg	ggatttcaga	agtagtcaaa	ctcctgctgg	acagacgatg	tcaacttaac	600
gtccttgaca	acaaaaagag	gacagctctg	ataaaggccg	tacaatgcca	ggaagatgaa	660
tgtgcgttaa	tgttgctggg	acatggcact	gatccaaata	ttccagatga	gtatggaaat	720
accactctgc	actacgctat	ctataatgaa	gataaattaa	tggccaaagc	actgctctta	780
tatggtgctg	atatcgaaat	aaaaaacaaag	catggcctca	caaccactgtt	acttggtgta	840
ctgagccee	acagcaagt	cgtgaaattt	ttaatcaaga	aaaaagcgaa	tttaaatgca	900
ctgcatagat	atggggggc	tgtctctata	cttctgtgat	gttgctgctc	agcaagtata	960
gtcagccttc	tacttgagca	aaatattgat	gtatcttctc	aaagctctatc	tggacagacg	1020
gccagagagt	atgctgtttc	tagtcatcat	catgtaattt	gccagttact	ttctgactac	1080
aaagaaaaac	agatgctaaa	aatctcttct	gaaaacagca	atccagaaaa	agtcttaaac	1140
ctgacatcag	aggaagagtc	acaaagggttc	aaaggcagtg	aaalagccca	gccagagaaa	1200
atgtctcaag	aaccagaat	aaataaggat	ggtgctagag	aggttgagga	agaaatgaag	1260
aagcatgaaa	gtaataatgt	gggattacta	gaaaacctga	ctaattggtgt	cactgctggc	1320
aatggtgata	atggattaat	tctcaaaagg	aagagcagaa	cacctgaaaa	tcagcaattt	1380
cctgacaaag	aaagtgaaga	gtatcacaga	atttgogaat	tagtttctga	ctacaaagaa	1440
aaacagatgc	caaaatactc	ttctgaaaac	agcaaccag	aacaagactt	aaagctgaca	1500
tcagaggaag	gtgcacaaag	gottgagggc	agtgaanaatg	gocagccaga	gctagaaat	1560
tttatggcta	togaagaat	gaagaagcac	ggaagtactc	atgtcggatt	cccagaaac	1620
ctgactaatg	gtgccaactg	tggcaatggt	cttgatggat	taattcctcc	aagggaagac	1680
agaacacctg	aaagccagca	atttctgac	actgagaatg	aagagtatca	cagtgcagaa	1740
caaatgata	ctcagaagca	atthtgtgaa	gaacagaaca	ctggaatatt	acacgatgag	1800
attctgattc	atgaageaaa	gcagatagaa	gtggttgaaa	aatgaattc	tgagctttct	1860
cttaattgtg	agaaagaaaa	agacatcttg	catgaaaata	gtacgttgcg	ggaagaaatt	1920
gcaatgctaa	gactggagct	agacacaaatg	aaacatcaga	gccagctaaa	aaaaaaaaaa	1980
aaaaaataaa	aaaaaataaa					2000

&lt;210&gt; 375



<211> 2040  
 <212> DNA  
 <213> Homo sapi n

<400> 375

atggttggttg	agggttgat	catgccggct	gcctcttctg	tgaagaagcc	atttgggtctc	60
aggagcaaga	tgggcaagt	gtgctgccgt	tgcttcccc	gotgcaggga	gagcggcaag	120
agcaacgttg	gcacttctg	agaccacgac	gactctgcta	tgaagacact	caggagcaag	180
atgggcaagt	gggtgccgca	ctgcttcccc	tgctgcagg	ggagtggcaa	gagcaacgtg	240
ggcgcttctg	gagaccacga	cgactctgct	atgaagacac	tcaggaaaca	gatgggcaag	300
tgggtgctgc	actgcttccc	ctgctgcagg	gggagcggca	agagcaagg	ggcgcttctg	360
ggagactacg	atgacagtgc	cttcattggg	cccagggtacc	acgtccgttg	agaagatctg	420
gacaagctcc	acagagctgc	ctgggtgggt	aaagtcccca	gaaaggatct	catcgtcatg	480
ctcaggggaca	ctgacgtgaa	caagaaggac	aagcnaaaga	ggactgctct	acatctggcc	540
tctgccaatg	ggatattcaga	agtagtaaaa	ctcctgctgg	acagacgatg	tcaactcaat	600
gtccttgaca	acaaaaagag	gacagctctg	ataaaggccg	tacaatgcca	ggagatgaa	660
tgtgcgttaa	tgttgcgtga	acatggcact	gatccaaata	ttccagatga	gtatggaaal	720
accactctgc	actacgctat	ctataatgaa	gataaattaa	tggccaaagc	actgctctta	780
tatggltgctg	atatcgaaat	aaaaaacaa	catggcctcc	caccactgtt	acttgggtga	840
catgagcaaa	aaacgcgaat	cgtgaaattt	tkaatcaga	aaaaagcgaa	tttaaatgca	900
ctggelagat	atggaaaggac	tgcctcctaa	cttgctgtat	gttggtggatc	agcaagtata	960
gtcagccttc	tacttgagca	aaatattgat	gtatcttctc	aagatctatc	tggacagacg	1020
gccagagagt	atgctgtttc	tagtcatcat	catgtaattt	gccagttact	ttctgactac	1080
aaagaaasac	agatgctaaa	aatctcttct	gaaaacagca	atccagaaca	agacttaaa	1140
ctgacatcag	aggaagagtc	acaaagggtc	aaaggcagtg	aaaatagcca	gccagagaaa	1200
atgtctcaag	aaccagaaat	aaataaggat	ggtgatagag	aggttgaga	agaaatgaag	1260
aagcatgaaa	gtaataatgt	gggattacta	gaaaacctga	ctaattggtg	cactgctggc	1320
aatggtgata	atggattaat	tcctcaaaag	aagagcagaa	cacctgaaaa	tcagcaattt	1380
cctgacaacg	aaagtgaaga	gtatcacaga	atttgogaat	tagtttctga	ctacaaagaa	1440
aaacagntgc	caaatatact	ttctgaaaac	agcaacccag	aacnagactt	aaagctggcc	1500
tcagagggag	agtcacaaa	guttgagggc	antgaaaatg	gucagccaga	gaaagatctc	1560
caagaccacg	aaetaaeta	ggatgggtgat	agagagctag	aaatlltat	ggctatcgaa	1620
gaaatgaaag	agcaacgga	tactcatgct	ggaltccnag	aaacctgac	taatggtgcc	1680
actgctggcc	atggtgatga	tggalttaatt	ctcccaaggc	agagcagAAC	acctgaaagc	1740
cagcaatttc	ctgacactga	gaatgaaagc	tatcacagtg	angaacaaaa	tgatactcag	1800
aagcaatttt	gtgaagaaca	gaacactgga	atattacacg	atgagattct	gattcatgaa	1860
gaaaagcaga	tagaagtgg	tgaasaaatg	aattctgagc	tttctcttag	ttgtaaagaa	1920
gaaaagacaa	tcttgcata	aaatagtacg	ttgcgggaag	aaattgccat	gctaagactg	1980
gagctagaca	caatgaasaa	tcagagccag	ctaaaaaaaa	aaaaaasaaa	aaaaaasaaa	2040

<210> 376  
 <211> 329  
 <212> PRT  
 <213> Homo sapien

<400> 376

Met	Asp	Ile	Val	Ser	Gly	Ser	His	Pro	Leu	Trp	Val	Asp	Ser	Phe
1			5					10					15	
Leu	His	Leu	Ala	Gly	Ser	Asp	Leu	Leu	Ser	Arg	Ser	Leu	Met	Ala
		20					25					30		Glu
Glu	Tyr	Thr	Ile	Val	His	Ala	Ser	Phe	Ile	Ser	Cys	Ile	Ser	Ser
	35						40				45			
Leu	Asp	Gly	Gln	Gly	Glu	Arg	Gln	Glu	Gln	Arg	Gly	His	Phe	Trp
	50					55				60				Arg
Pro	Gln	Arg	Leu	Leu	Cys	Glu	Asp	Ala	Trp	Glu	Gln	Glu	Val	Gln
	65				70				75					80
Val	Leu	Pro	Leu	Leu	Pro	Leu	Leu	Gln	Gly	Ser	Gly	Lys	Ser	Asn
			85					90					95	Val
Val	Ala	Trp	Gly	Asp	Tyr	Asp	Asp	Ser	Ala	Phe	Met	Asp	Pro	Arg
			100					105					110	Tyr
His	Val	His	Gly	Glu	Asp	Leu	Asp	Lys	Leu	His	Arg	Ala	Ala	Trp
			115					120						125

Gly Lys Val Pro Arg Lys Asp Leu Ile Val Met Leu Arg Asp Thr Asp  
 130 135 140  
 Val Asn Lys Arg Asp Lys Gln Lys Arg Thr Ala Leu His Leu Ala Ser  
 145 150 155 160  
 Ala Asn Gly Asn Ser Glu Val Val Lys Leu Val Leu Asp Arg Arg Cys  
 165 170 175  
 Gln Leu Asn Val Leu Asp Asn Lys Lys Arg Thr Ala Leu Thr Lys Ala  
 180 185 190  
 Val Gln Cys Gln Glu Asp Glu Cys Ala Leu Met Leu Leu Glu His Gly  
 195 200 205  
 Thr Asp Pro Asn Ile Pro Asp Glu Tyr Gly Asn Thr Thr Leu His Tyr  
 210 215 220  
 Ala Val Tyr Asn Glu Asp Lys Leu Met Ala Lys Ala Leu Leu Leu Tyr  
 225 230 235 240  
 Gly Ala Asp Ile Glu Ser Lys Asn Lys His Gly Leu Thr Pro Leu Leu  
 245 250 255  
 Leu Gly Ile His Glu Gln Lys Gln Gln Val Val Lys Phe Leu Ile Lys  
 260 265 270  
 Lys Lys Ala Asn Leu Asn Ala Leu Asp Arg Tyr Gly Arg Thr Ala Leu  
 275 280 285  
 Ile Leu Ala Val Cys Cys Gly Ser Ala Ser Ile Val Ser Pro Leu Leu  
 290 295 300  
 Glu Gln Asn Val Asp Val Ser Ser Gln Asp Leu Glu Arg Arg Pro Glu  
 305 310 315 320  
 Ser Met Leu Phe Leu Val Ile Ile Met  
 325

&lt;210&gt; 377

&lt;211&gt; 148

&lt;212&gt; PRT

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; VARIANT

&lt;222&gt; (1)...(148)

&lt;223&gt; Xaa = Any Amino Acid

&lt;400&gt; 377

Met Thr Xaa Pro Ser Trp Ser Pro Gly Thr Thr Ser Val Glu Lys Ile  
 1 5 10 15  
 Trp Thr Ser Ser Thr Glu Leu Pro Trp Gly Lys Val Pro Arg Lys  
 20 25 30  
 Asp Leu Ile Val Met Leu Arg Asp Thr Asp Val Asn Lys Xaa Asp Lys  
 35 40 45  
 Gln Lys Arg Thr Ala Leu His Leu Ala Ser Ala Asn Gly Asn Ser Glu  
 50 55 60  
 Val Val Lys Leu Xaa Leu Asp Arg Arg Cys Gln Leu Asn Val Leu Asp  
 65 70 75 80  
 Asn Lys Lys Arg Thr Ala Leu Xaa Lys Ala Val Gln Cys Gln Glu Asp  
 85 90 95  
 Glu Cys Ala Leu Met Leu Leu Glu His Gly Thr Asp Pro Asn Ile Pro  
 100 105 110  
 Asp Glu Tyr Gly Asn Thr Thr Leu His Tyr Ala Xaa Tyr Asn Glu Asp  
 115 120 125  
 Lys Leu Met Ala Lys Ala Leu Leu Leu Tyr Gly Ala Asp Ile Glu Ser  
 130 135 140  
 Lys Asn Lys Val  
 145

&lt;210&gt; 378

&lt;211&gt; 1719

&lt;212&gt; PRT

&lt;213&gt; Homo sapi n

&lt;400&gt; 378

Met Val Val Glu Val Asp Ser Met Pro Ala Ala Ser Ser Val Lys Lys  
 1 5 10 15  
 Pro Phe Gly Leu Arg Ser Lys Met Gly Lys Trp Cys Cys Arg Cys Phe  
 20 25 30  
 Pro Cys Cys Arg Glu Ser Gly Lys Ser Asn Val Gly Thr Ser Gly Asp  
 35 40 45  
 His Asp Asp Ser Ala Met Lys Thr Leu Arg Ser Lys Met Gly Lys Trp  
 50 55 60  
 Cys Arg His Cys Phe Pro Cys Cys Arg Gly Ser Gly Lys Ser Asn Val  
 65 70 75 80  
 Gly Ala Ser Gly Asp His Asp Asp Ser Ala Met Lys Thr Leu Arg Asn  
 85 90 95  
 Lys Met Gly Lys Trp Cys Cys His Cys Phe Pro Cys Cys Arg Gly Ser  
 100 105 110  
 Gly Lys Ser Lys Val Gly Ala Trp Gly Asp Tyr Asp Asp Ser Ala Phe  
 115 120 125  
 Met Glu Pro Arg Tyr His Val Arg Gly Glu Asp Leu Asp Lys Leu His  
 130 135 140  
 Arg Ala Ala Trp Trp Gly Lys Val Pro Arg Lys Asp Leu Ile Val Met  
 145 150 155 160  
 Leu Arg Asp Thr Asp Val Asn Lys Lys Asp Lys Gln Lys Arg Thr Ala  
 165 170 175  
 Leu His Leu Ala Ser Ala Asn Gly Asn Ser Glu Val Val Lys Leu Leu  
 180 185 190  
 Leu Asp Arg Arg Cys Gln Leu Asn Val Leu Asp Asn Lys Lys Arg Thr  
 195 200 205  
 Ala Leu Ile Lys Ala Val Cln Cys Gln Glu Asp Glu Cys Ala Leu Met  
 210 215 220  
 Leu Leu Glu His Gly Thr Asp Pro Asn Ile Pro Asp Glu Tyr Gly Asn  
 225 230 235 240  
 Thr Thr Leu His Tyr Ala Ile Tyr Asn Glu Asp Lys Leu Met Ala Lys  
 245 250 255  
 Ala Leu Leu Leu Tyr Gly Ala Asp Ile Glu Ser Lys Asn Lys His Gly  
 260 265 270  
 Leu Thr Pro Leu Leu Leu Gly Val His Glu Gln Lys Gln Gln Val Val  
 275 280 285  
 Lys Phe Leu Ile Lys Lys Lys Ala Asn Leu Asn Ala Leu Asp Arg Tyr  
 290 295 300  
 Gly Arg Thr Ala Leu Ile Leu Ala Val Cys Cys Gly Ser Ala Ser Ile  
 305 310 315 320  
 Val Ser Leu Leu Leu Glu Gln Asn Ile Asp Val Ser Ser Gln Asp Leu  
 325 330 335  
 Ser Gly Gln Thr Ala Arg Glu Tyr Ala Val Ser Ser His His His Val  
 340 345 350  
 Ile Cys Gln Leu Leu Ser Asp Tyr Lys Glu Lys Gln Met Leu Lys Ile  
 355 360 365  
 Ser Ser Glu Asn Ser Asn Pro Glu Asn Val Ser Arg Thr Arg Asn Lys  
 370 375 380  
 Pro Arg Thr His Met Val Val Glu Val Asp Ser Met Pro Ala Ala Ser  
 385 390 395 400  
 Ser Val Lys Lys Pro Phe Gly Leu Arg Ser Lys Met Gly Lys Trp Cys  
 405 410 415  
 Cys Arg Cys Phe Pro Cys Cys Arg Glu Ser Gly Lys Ser Asn Val Gly  
 420 425 430  
 Thr Ser Gly Asp His Asp Asp Ser Ala Met Lys Thr Leu Arg Ser Lys  
 435 440 445  
 Met Gly Lys Trp Cys Arg His Cys Phe Pro Cys Cys Arg Gly Ser Gly  
 450 455 460  
 Lys Ser Asn Val Gly Ala Ser Gly Asp His Asp Asp Ser Ala Met Lys

465	Thr	Leu	Arg	Asn	Lys	Met	Gly	Lys	Trp	Cys	Cys	His	Cys	Phe	Pro	Cys	480
				485						490						495	
Cys	Arg	Gly	Ser	Gly	Lys	Ser	Lys	Val	Gly	Ala	Trp	Gly	Asp	Tyr	Asp		
			500					505						510			
Asp	Ser	Ala	Phe	Met	Glu	Pro	Arg	Tyr	His	Val	Arg	Gly	Glu	Asp	Leu		
		515					520					525					
Asp	Lys	Leu	His	Arg	Ala	Ala	Trp	Trp	Gly	Lys	Val	Pro	Arg	Lys	Asp		
	530				535						540						
Leu	Ile	Val	Met	Leu	Arg	Asp	Thr	Asp	Val	Asn	Lys	Lys	Asp	Lys	Gln		
545				550						555					560		
Lys	Arg	Thr	Ala	Leu	His	Leu	Ala	Ser	Ala	Asn	Gly	Asn	Ser	Glu	Val		
			565						570					575			
Val	Lys	Leu	Leu	Leu	Asp	Arg	Arg	Cys	Gln	Leu	Asn	Val	Leu	Asp	Asn		
		580						585					590				
Lys	Lys	Arg	Thr	Ala	Leu	Ile	Lys	Ala	Val	Gln	Cys	Gln	Glu	Asp	Glu		
		595					600					605					
Cys	Ala	Leu	Met	Leu	Leu	Glu	His	Gly	Thr	Asp	Pro	Asn	Ile	Pro	Asp		
	610					615					620						
Glu	Tyr	Gly	Asn	Thr	Thr	Leu	His	Tyr	Ala	Ile	Tyr	Asn	Glu	Asp	Lys		
625				630						635					640		
Leu	Met	Ala	Lys	Ala	Leu	Leu	Leu	Tyr	Gly	Ala	Asp	Ile	Glu	Ser	Lys		
			645						650					655			
Asn	Lys	His	Gly	Leu	Thr	Pro	Leu	Leu	Leu	Gly	Val	His	Glu	Gln	Lys		
			660					665					670				
Gln	Gln	Val	Val	Lys	Phe	Leu	Ile	Lys	Lys	Lys	Ala	Asn	Leu	Asn	Ala		
		675					680					685					
Leu	Asp	Arg	Tyr	Gly	Arg	Thr	Ala	Leu	Ile	Leu	Ala	Val	Cys	Cys	Gly		
	690					695					700						
Ser	Ala	Ser	Ile	Val	Ser	Leu	Leu	Leu	Glu	Gln	Asn	Ile	Asp	Val	Ser		
705				710						715					720		
Ser	Gln	Asp	Leu	Ser	Gly	Gln	Thr	Ala	Arg	Glu	Tyr	Ala	Val	Ser	Ser		
			725					730						735			
His	His	His	Val	Ile	Cys	Gln	Leu	Leu	Ser	Asp	Tyr	Lys	Glu	Lys	Gln		
			740				745						750				
Met	Leu	Lys	Ile	Ser	Ser	Glu	Asn	Ser	Asn	Pro	Glu	Gln	Asp	Leu	Lys		
		755				760						765					
Leu	Thr	Ser	Glu	Glu	Glu	Ser	Gln	Arg	Phe	Lys	Gly	Ser	Glu	Asn	Ser		
	770					775					780						
Gln	Pro	Glu	Lys	Met	Ser	Gln	Glu	Pro	Glu	Ile	Asn	Lys	Asp	Gly	Asp		
785				805						795							

	965		970		975
Cys Glu Glu Gln	Asn Thr Gly Ile Leu	His Asp Glu Ile Leu	Ile His		
	980		985		990
Glu Glu Lys Gln	Ile Glu Val Val Glu	Lys Met Asn Ser Glu	Leu Ser		
	995		1000		1005
Leu Ser Cys Lys	Lys Glu Lys Asp Ile Leu	His Glu Asn Ser Thr	Leu		
	1010		1015		1020
Arg Glu Glu Ile	Ala Met Leu Arg Leu	Glu Leu Asp Thr Met	Lys His		
	1025		1030		1035
Gln Ser Gln Leu	Pro Arg Thr His Met	Val Val Glu Val Asp	Ser Met		
	1045		1050		1055
Pro Ala Ala Ser	Ser Val Lys Lys Pro	Phe Gly Leu Arg Ser	Lys Met		
	1060		1065		1070
Gly Lys Trp Cys	Cys Arg Cys Phe Pro	Cys Cys Arg Glu	Ser Gly Lys		
	1075		1080		1085
Ser Asn Val Gly	Thr Ser Gly Asp His	Asp Asp Ser Ala	Met Lys Thr		
	1090		1095		1100
Leu Arg Ser Lys	Met Gly Lys Trp Cys	Arg His Cys Phe	Pro Cys Cys		
	1105		1110		1115
Arg Gly Ser Gly	Lys Ser Asn Val Gly	Ala Ser Gly Asp	His Asp Asp		
	1125		1130		1135
Ser Ala Met Lys	Thr Leu Arg Asn Lys	Met Gly Lys Trp	Cys Cys His		
	1140		1145		1150
Cys Phe Pro Cys	Cys Arg Gly Ser Gly	Lys Ser Lys Val	Gly Ala Trp		
	1155		1160		1165
Gly Asp Tyr Asp	Asp Ser Ala Phe	Met Glu Pro Arg	Tyr His Val		
	1170		1175		1180
Gly Glu Asp Leu	Asp Lys Leu His Arg	Ala Ala Trp Trp	Gly Lys Val		
	1185		1190		1195
Pro Arg Lys Asp	Leu Ile Val Met Leu	Arg Asp Thr Asp	Val Asn Lys		
	1205		1210		1215
Lys Asp Lys Gln	Lys Arg Thr Ala Leu	His Leu Ala Ser	Ala Asn Gly		
	1220		1225		1230
Asn Ser Glu Val	Val Lys Leu Leu Leu	Asp Arg Arg Cys	Gln Leu Asn		
	1235		1240		1245
Val Leu Asp Asn	Lys Lys Arg Thr Ala	Leu Ile Lys Ala	Val Gln Cys		
	1250		1255		1260
Gln Glu Asp Glu	Cys Ala Leu Met Leu	Leu Glu His Gly	Thr Asp Pro		
	1265		1270		1275
Asn Ile Pro Asp	Glu Tyr Gly Asn Thr	Thr Leu His Tyr	Ala Ile Tyr		
	1285		1290		1295
Asn Glu Asp Lys	Leu Met Ala Lys Ala	Leu Leu Leu Tyr	Gly Ala Asp		
	1300		1305		1310
Ile Glu Ser Lys	Asn Lys His Gly Leu	Thr Pro Leu Leu	Leu Gly Val		
	1315		1320		1325
His Glu Gln Lys	Gln Gln Val Val Lys	Phe Leu Ile Lys	Lys Lys Ala		
	1330		1335		1340
Asn Leu Asn Ala	Leu Asp Arg Tyr Gly	Arg Thr Ala Leu	Ile Leu Ala		
	1345		1350		1355
Val Cys Cys Gly	Ser Ala Ser Ile Val	Ser Leu Leu Leu	Glu Gln Asn		
	1365		1370		1375
Ile Asp Val Ser	Ser Gln Asp Leu Ser	Gly Gln Thr Ala	Arg Glu Tyr		
	1380		1385		1390
Ala Val Ser Ser	His His His Val	Ile Cys Gln Leu	Leu Ser Asp		
	1395		1400		1405
Lys Glu Lys Gln	Met Leu Lys Ile Ser	Ser Glu Asn Ser	Asn Pro Glu		
	1410		1415		1420
Gln Asp Leu Lys	Leu Thr Ser Glu Glu	Glu Ser Gln Arg	Phe Lys Gly		
	1425		1430		1435
S r Glu Asn Ser	Gln Pro Glu Lys Met	Ser Gln Glu Pro	Glu Ile Asn		
	1445		1450		1455
Lys Asp Gly Asp	Arg Glu Val Glu Glu	Glu Met Lys Lys	His Glu Ser		

1460 1465 1470  
 Asn Asn Val Gly Leu Leu Glu Asn Leu Thr Asn Gly Val Thr Ala Gly  
 1475 1480 1485  
 Asn Gly Asp Asn Gly Leu Ile Pro Gln Arg Lys Ser Arg Thr Pro Glu  
 1490 1495 1500  
 Asn Gln Gln Phe Pro Asp Asn Glu Ser Glu Glu Tyr His Arg Ile Cys  
 1505 1510 1515 152  
 Glu Leu Val Ser Asp Tyr Lys Glu Lys Gln Met Pro Lys Tyr Ser Ser  
 1525 1530 1535  
 Glu Asn Ser Asn Pro Glu Gln Asp Leu Lys Leu Thr Ser Glu Glu Glu  
 1540 1545 1550  
 Ser Gln Arg Leu Glu Gly Ser Glu Asn Gly Gln Pro Glu Lys Arg Ser  
 1555 1560 1565  
 Gln Glu Pro Glu Ile Asn Lys Asp Gly Asp Arg Glu Leu Glu Asn Phe  
 1570 1575 1580  
 Met Ala Ile Glu Glu Met Lys Lys His Gly Ser Thr His Val Gly Phe  
 1585 1590 1595 160  
 Pro Glu Asn Leu Thr Asn Gly Ala Thr Ala Gly Asn Gly Asp Asp Gly  
 1605 1610 1615  
 Leu Ile Pro Pro Arg Lys Ser Arg Thr Pro Glu Ser Gln Gln Phe Pro  
 1620 1625 1630  
 Asp Thr Glu Asn Glu Glu Tyr His Ser Asp Glu Gln Asn Asp Thr Gln  
 1635 1640 1645  
 Lys Gln Phe Cys Glu Glu Gln Asn Thr Gly Ile Leu His Asp Glu Ile  
 1650 1655 1660  
 Leu Ile His Glu Glu Lys Gln Ile Glu Val Val Glu Lys Met Asn Ser  
 1665 1670 1675 168  
 Glu Leu Ser Leu Ser Cys Lys Lys Glu Lys Asp Ile Leu His Glu Asn  
 1685 1690 1695  
 Ser Thr Leu Arg Glu Glu Ile Ala Met Leu Arg Leu Glu Leu Asp Thr  
 1700 1705 1710  
 Met Lys His Gln Ser Gln Leu  
 1715

<210> 379  
 <211> 656  
 <212> PRT  
 <213> Homo sapien

<400> 379  
 Met Val Val Glu Val Asp Ser Met Pro Ala Ala Ser Ser Val Lys Lys  
 1 5 10 15  
 Pro Phe Gly Leu Arg Ser Lys Met Gly Lys Trp Cys Cys Arg Cys Phe  
 20 25 30  
 Pro Cys Cys Arg Glu Ser Gly Lys Ser Asn Val Gly Thr Ser Gly Asp  
 35 40 45  
 His Asp Asp Ser Ala Met Lys Thr Leu Arg Ser Lys Met Gly Lys Trp  
 50 55 60  
 Cys Arg His Cys Phe Pro Cys Cys Arg Gly Ser Gly Lys Ser Asn Val  
 65 70 75 80  
 Gly Ala Ser Gly Asp His Asp Asp Ser Ala Met Lys Thr Leu Arg Asn  
 85 90 95  
 Lys Met Gly Lys Trp Cys Cys His Cys Phe Pro Cys Cys Arg Gly Ser  
 100 105 110  
 Gly Lys Ser Lys Val Gly Ala Trp Gly Asp Tyr Asp Asp Ser Ala Phe  
 115 120 125  
 Met Glu Pro Arg Tyr His Val Arg Gly Glu Asp Leu Asp Lys Leu His  
 130 135 140  
 Arg Ala Ala Trp Trp Gly Lys Val Pro Arg Lys Asp Leu Ile Val Met  
 145 150 155 160  
 Leu Arg Asp Thr Asp Val Asn Lys Lys Asp Lys Gln Lys Arg Thr Ala  
 165 170 175

Leu His L u Ala Ser Ala Asn Gly Asn Ser Glu Val Val Lys Leu Leu  
 180 185 190  
 Leu Asp Arg Arg Cys Gln Leu Asn Val Leu Asp Asn Lys Lys Arg Thr  
 195 200 205  
 Ala Leu Ile Lys Ala Val Gln Cys Gln Glu Asp Glu Cys Ala Leu Met  
 210 215 220  
 Leu Leu Glu His Gly Thr Asp Pro Asn Ile Pro Asp Glu Tyr Gly Asn  
 225 230 235 240  
 Thr Thr Leu His Tyr Ala Ile Tyr Asn Glu Asp Lys Leu Met Ala Lys  
 245 250 255  
 Ala Leu Leu Leu Tyr Gly Ala Asp Ile Glu Ser Lys Asn Lys His Gly  
 260 265 270  
 Leu Thr Pro Leu Leu Leu Gly Val His Glu Gln Lys Gln Gln Val Val  
 275 280 285  
 Lys Phe Leu Ile Lys Lys Lys Ala Asn Leu Asn Ala Leu Asp Arg Tyr  
 290 295 300  
 Gly Arg Thr Ala Leu Ile Leu Ala Val Cys Cys Gly Ser Ala Ser Ile  
 305 310 315 320  
 Val Ser Leu Leu Leu Glu Gln Asn Ile Asp Val Ser Ser Gln Asp Leu  
 325 330 335  
 Ser Gly Gln Thr Ala Arg Glu Tyr Ala Val Ser Ser His His His Val  
 340 345 350  
 Ile Cys Gln Leu Leu Ser Asp Tyr Lys Glu Lys Gln Met Leu Lys Ile  
 355 360 365  
 Ser Ser Glu Asn Ser Asn Pro Glu Gln Asp Leu Lys Leu Thr Ser Glu  
 370 375 380  
 Glu Glu Ser Gln Arg Phe Lys Gly Ser Glu Asn Ser Gln Pro Glu Lys  
 385 390 395 400  
 Met Ser Gln Glu Pro Glu Ile Asn Lys Asp Gly Asp Arg Glu Val Glu  
 405 410 415  
 Glu Glu Met Lys Lys His Glu Ser Asn Asn Val Gly Leu Leu Glu Asn  
 420 425 430  
 Leu Thr Asn Gly Val Thr Ala Gly Asn Gly Asp Asn Gly Leu Ile Pro  
 435 440 445  
 Gln Arg Lys Ser Arg Thr Pro Glu Asn Gln Gln Phe Pro Asp Asn Glu  
 450 455 460  
 Ser Glu Glu Tyr His Arg Ile Cys Glu Leu Val Ser Asp Tyr Lys Glu  
 465 470 475 480  
 Lys Gln Met Pro Lys Tyr Ser Ser Glu Asn Ser Asn Pro Glu Gln Asp  
 485 490 495  
 Leu Lys Leu Thr Ser Glu Glu Glu Ser Gln Arg Leu Glu Gly Ser Glu  
 500 505 510  
 Asn Gly Gln Pro Glu Leu Glu Asn Phe Met Ala Ile Glu Glu Met Lys  
 515 520 525  
 Lys His Gly Ser Thr His Val Gly Phe Pro Glu Asn Leu Thr Asn Gly  
 530 535 540  
 Ala Thr Ala Gly Asn Gly Asp Asp Gly Leu Ile Pro Pro Arg Lys Ser  
 545 550 555 560  
 Arg Thr Pro Glu Ser Gln Gln Phe Pro Asp Thr Glu Asn Glu Glu Tyr  
 565 570 575  
 His Ser Asp Glu Gln Asn Asp Thr Gln Lys Gln Phe Cys Glu Glu Gln  
 580 585 590  
 Asn Thr Gly Ile Leu His Asp Glu Ile Leu Ile His Glu Glu Lys Gln  
 595 600 605  
 Ile Glu Val Val Glu Lys Met Asn Ser Glu Leu Ser Leu Ser Cys Lys  
 610 615 620  
 Lys Glu Lys Asp Ile Leu His Glu Asn Ser Thr Leu Arg Glu Glu Ile  
 625 630 635 640  
 Ala Met Leu Arg Leu Glu Leu Asp Thr Met Lys His Gln Ser Gln Leu  
 645 650 655

&lt;210&gt; 380

&lt;211&gt; 671

&lt;212&gt; PRT

&lt;213&gt; Homo sapien

&lt;400&gt; 380

Met Val Val Glu Val Asp Ser Met Pro Ala Ala Ser Ser Val Lys Lys  
 1 5 10 15  
 Pro Phe Gly Leu Arg Ser Lys Met Gly Lys Trp Cys Cys Arg Cys Phe  
 20 25 30  
 Pro Cys Cys Arg Glu Ser Gly Lys Ser Asn Val Gly Thr Ser Gly Asp  
 35 40 45  
 His Asp Asp Ser Ala Met Lys Thr Leu Arg Ser Lys Met Gly Lys Trp  
 50 55 60  
 Cys Arg His Cys Phe Pro Cys Cys Arg Gly Ser Gly Lys Ser Asn Val  
 65 70 75 80  
 Gly Ala Ser Gly Asp His Asp Asp Ser Ala Met Lys Thr Leu Arg Asn  
 85 90 95  
 Lys Met Gly Lys Trp Cys Cys His Cys Phe Pro Cys Cys Arg Gly Ser  
 100 105 110  
 Gly Lys Ser Lys Val Gly Ala Trp Gly Asp Tyr Asp Asp Ser Ala Phe  
 115 120 125  
 Met Glu Pro Arg Tyr His Val Arg Gly Glu Asp Leu Asp Lys Leu His  
 130 135 140  
 Arg Ala Ala Trp Trp Gly Lys Val Pro Arg Lys Asp Leu Ile Val Met  
 145 150 155 160  
 Leu Arg Asp Thr Asp Val Asn Lys Lys Asp Lys Gln Lys Arg Thr Ala  
 165 170 175  
 Leu His Leu Ala Ser Ala Asn Gly Asn Ser Glu Val Val Lys Leu Leu  
 180 185 190  
 Leu Asp Arg Arg Cys Gln Leu Asn Val Leu Asp Asn Lys Lys Arg Thr  
 195 200 205  
 Ala Leu Ile Lys Ala Val Gln Cys Gln Glu Asp Glu Cys Ala Leu Met  
 210 215 220  
 Leu Leu Glu His Gly Thr Asp Pro Asn Ile Pro Asp Glu Tyr Gly Asn  
 225 230 235 240  
 Thr Thr Leu His Tyr Ala Ile Tyr Asn Glu Asp Lys Leu Met Ala Lys  
 245 250 255  
 Ala Leu Leu Leu Tyr Gly Ala Asp Ile Glu Ser Lys Asn Lys His Gly  
 260 265 270  
 Leu Thr Pro Leu Leu Leu Gly Val His Glu Gln Lys Gln Gln Val Val  
 275 280 285  
 Lys Phe Leu Ile Lys Lys Lys Ala Asn Leu Asn Ala Leu Asp Arg Tyr  
 290 295 300  
 Gly Arg Thr Ala Leu Ile Leu Ala Val Cys Cys Gly Ser Ala Ser Ile  
 305 310 315 320  
 Val Ser Leu Leu Leu Glu Gln Asn Ile Asp Val Ser Ser Gln Asp Leu  
 325 330 335  
 Ser Gly Gln Thr Ala Arg Glu Tyr Ala Val Ser Ser His His His Val  
 340 345 350  
 Ile Cys Gln Leu Leu Ser Asp Tyr Lys Glu Lys Gln Met Leu Lys Ile  
 355 360 365  
 Ser Ser Glu Asn Ser Asn Pro Glu Gln Asp Leu Lys Leu Thr Ser Glu  
 370 375 380  
 Glu Glu Ser Gln Arg Phe Lys Gly Ser Glu Asn Ser Gln Pro Glu Lys  
 385 390 395 400  
 Met Ser Gln Glu Pro Glu Ile Asn Lys Asp Gly Asp Arg Glu Val Glu  
 405 410 415  
 Glu Glu Met Lys Lys His Glu Ser Asn Asn Val Gly Leu Leu Glu Asn  
 420 425 430  
 Leu Thr Asn Gly Val Thr Ala Gly Asn Gly Asp Asn Gly Leu Ile Pro  
 435 440 445  
 Gln Arg Lys Ser Arg Thr Pro Glu Asn Gln Gln Phe Pro Asp Asn Glu



450	Ser Glu Glu Tyr His	455	Arg Ile Cys Glu Leu Val	460	Ser Asp Tyr Lys Glu
465	Lys Gln Met Pro Lys	470	Tyr Ser Ser Glu Asn Ser	475	Asn Pro Glu Gln Asp
	485		490		495
Leu Lys Leu Thr	Ser Glu Glu Glu Ser	Gln Glu Arg Leu	Glu Gly Ser Glu		
	500		505		510
Asn Gly Gln Pro Glu	Lys Arg Ser Gln	Glu Pro Glu Ile	Asn Lys Asp		
	515		520		525
Gly Asp Arg Glu Leu	Glu Asn Phe Met Ala	Ile Glu Glu Met	Lys Lys		
	530		535		540
His Gly Ser Thr His	Val Gly Phe Pro Glu	Asn Leu Thr Asn	Gly Ala		
	545		550		555
Thr Ala Gly Asn Gly	Asp Asp Gly Leu Ile	Pro Pro Arg Lys	Ser Arg		
	565		570		575
Thr Pro Glu Ser Gln	Gln Phe Pro Asp Thr	Glu Asn Glu Glu	Tyr His		
	580		585		590
Ser Asp Glu Gln Asn	Asp Thr Gln Lys	Gln Phe Cys Glu	Glu Gln Asn		
	595		600		605
Thr Gly Ile Leu His	Asp Glu Ile Leu	Ile His Glu Glu	Lys Gln Ile		
	610		615		620
Glu Val Val Glu Lys	Met Asn Ser Glu	Leu Ser Leu Ser	Cys Lys Lys		
	625		630		635
Glu Lys Asp Ile Leu	His Glu Asn Ser	Thr Leu Arg Glu	Glu Ile Ala		
	645		650		655
Met Leu Arg Leu Glu	Leu Asp Thr Met	Lys His Gln Ser	Gln Leu		
	660		665		670

<210> 381  
 <211> 251  
 <212> DNA  
 <213> Homo sapien

<400> 381	
ggagaagcgt ctgctggggc aggaaggggt ttccctgccc tctcacctgt cctcacccaa	60
ggtaacatgc ttccctaaag ggtatcccaa cccaggggcc tcaccatgac ctctgagggg	120
ccaatatccc aggagaagca ttggggaggt gggggcaggt gaaggaccca ggactcacac	180
atcctggggc tccaaggcag aggagagggt cctcaagaag gtcaggagga aatccgtaa	240
caagcagtcg g	251

<210> 382  
 <211> 3279  
 <212> DNA  
 <213> Homo sapiens

<400> 382	
cttcctgcag cccctctgct gglgaggggc acgggcaggc acagtgagacc caacatggaa	60
atgclggagg gtgtcaggaa gtatcgggc tctggggcag ggaggagggg tgggagtggt	120
cctgaggagg ggcacatctg cggagggtag gagtggagca acacccgctg caggggaggg	180
ggagagccctg cggcacctgg gggagcagag ggagcagcac ctgcccaggc ctgggaggag	240
gggcctggag ggcgtgagga ggagcaggg ggctgcatgg ctggagttag ggcacaggg	300
caggggcgga gatggcctca cacagggaag agaggggccc tctgcaggg cctcacctgg	360
gccacaggag gacactgctt ttctctgag gagttaggag ctgtggatgg tgcaggacag	420
aagaaggaca gggcctggct cagggtgtcca gaggctgtcg ctggcttccc ttgggagaca	480
gactgcaggg agggagggcg gcagggttgt ggggggagtg acgatgagga tgacctggg	540
gtggtctccag gccttgcccc tgctggggc ctcaccagc ctccctcaca gtctctggc	600
cctcagttct tccctccac tccatcctcc atctggcctc agtgggtcat tctgatcaat	660
gaactgacca taccagggcc tgcccacggc cctccatggc tccccaatgc cctggagagg	720
ggacatctag tcagagagta gtccgaaga ggtggcctct gggatgtgcc tgtgggggca	780
gcacatctga gatggtcccg gccctcatcc tgcagacctg tctgcaggga ctgtcctcct	840
ggaccttgcc cctgtgtgag gagctggacc ctgaagtcac ctccctatag gccaaagact	900
gagccttggt cctctgtgtg gactccctgc ccatattctt gaggaggtgg gttctggaqa	960

```
<210> 363
<211> 155
<212> PRT
<213> Homo sapiens
```

<100> 3B3

Met Ala Gly Val Arg<sub>5</sub> Asp Glu Gly Gln Gly<sub>10</sub> Ala Arg Trp Pro His<sub>15</sub> Thr

Gly Lys Arg Gly Pro Leu Leu Gln Gly Leu Thr Trp Ala Thr Gly Gly  
20 25 30

His Cys Phe Ser Ser Glu Glu Ser Gly Ala Val Asp Gly Ala Gly Gln  
35 40 45

Lys Lys Asp Arg Ala Trp Leu Arg Cys Pro Glu Ala Val Ala Gly Phe  
50 55 60

Pro Leu Gly Ser Asp Cys Arg Glu Gly Gly Arg Gln Gly Cys Gly Gly  
65 70 75 80

Ser Asp Asp Glu Asp Asp Leu Gly Val Ala Pro Gly Leu Ala Pro Ala

125

	85		90		95										
Trp	Ala	Leu	Thr	Gln	Pro	Pro	Ser	Gln	Ser	Pro	Gly	Pro	Gln	Ser	Leu
	100							105					110		
Pro	Ser	Thr	Pro	Ser	Ser	Ile	Trp	Pro	Gln	Trp	Val	Ile	Leu	Ile	Thr
	115						120					125			
Glu	Leu	Thr	Ile	Pro	Ser	Pro	Ala	His	Gly	Pro	Pro	Trp	Leu	Pro	Asn
	130					135					140				
Ala	Leu	Glu	Arg	Gly	His	Leu	Val	Arg	Glu						
	145				150										

<210> 384  
 <211> 557  
 <212> DNA  
 <213> Homo sapiens

<400> 384  
 ggatcctcta gaggcgccgc ctactactac taaattcgcg gccgcgtcga cgaagaagag 60  
 aaagatgtgt ttgtttttgg actctctgtg gtcccttcca atgctgtggg ttccaacca 120  
 ggggaagggt ccccttttgc ttgccaagt ccataacct gacactact ctaccatgg 180  
 tctgcctcct ggccaagcag gctggtttgc aagaatgaaa tgaatgatto tacagctagg 240  
 acttaacctt gaaatggaaa gtcttgcaat cccatttgcg ggatccgtct gtgcacatgc 300  
 ctctgtagag agcagcattc ccagggacct tggaaacagt tggcactgta aggtgcttgc 360  
 tccccaaagac acatccataa aggtgtttgt atggtgaaaa cgtcttccct ctttattggc 420  
 ccttcttatt tatgtgaaca actgtttgtc tttttttgta tcttttttaa actgtaaaat 480  
 tccattgtga aattgcatat catgcacata atttatgcga ttttttttcc aaagtcaaaa 540  
 aaaaaaa 557

<210> 385  
 <211> 337  
 <212> DNA  
 <213> Homo sapiens

<400> 385  
 ttcccagggt atgtgcgagg gaagacacat ttaatatcct tgatggggct gattccttta 60  
 gttctcttag cagcagatgg gttaggagga agtgacccaa gtggttgact cctatgtgca 120  
 tctcaaaagc atctgtgtc ttogagtag gacacatcat cactcctgca ttgttgatca 180  
 aaacgtggag gtgtttttcc tcagctaaga agcccttagc azaagctcga atagacttag 240  
 tatcagacag gtccagtttc vgcaccaaca cctgtgtgtt cctgtcgtg gctcggatct 300  
 ctttggccac caattccccc ttttccacat cccggca 337

<210> 386  
 <211> 300  
 <212> DNA  
 <213> Homo sapiens

<400> 386  
 gggcccgcta ccggccagg cccgcctcgc cgagtccctc tccccgggtg cctgcccga 60  
 gccgcctcgg ccagagggt gggcgcgggg ctgcctctac cggctggcgg ctgtaactca 120  
 gcgaccttgg ccgaagggt ctagcaagga cccaccgacc ccagccgagg ccggcgcggc 180  
 gcggactttg cccggtgtgt gggcgggagc ggactgcgtg tccgcggacg ggcagcgaag 240  
 atgttagcct tcgtgccag gaccgtggac cgatcccagg gctgtggtgt aacctcagcc 300

<210> 387  
 <211> 537  
 <212> DNA  
 <213> Homo sapiens

&lt;400&gt; 387

```

gggcaggctc gggcaccag ggaacttttg caggcttcc tccctggatc atcaaggctg 60
ccccctcttg tgcacatcatg atcagcacct atgagttcgg caaaagcttc ttccagaggc 120
tgaaccagga ccggcttctg gggggctgaa aggggcaagg aggcaggac ccctctctc 180
cccggtatgg ggaaggggca gggggagacc cagccaagtg ccttttctc agcactgagg 240
gagggggctt gtttcccttc cctccggcg caagctcca gggcagggt gtccctctg 300
gcggccagc acttctcag acacaaactt tccctgctg tccagtcgtg gggatcatca 360
cttaccacc cccaagttc aagaccat ctccagctg cccctctgt gtttccctgt 420
gtttgctgta gctgggcatg tctccaggaa ccaagagcc ctccagctgt tgtagtctcc 480
ctgacccttg ttaattcctt aagtctaaag atgctgact tcaaaaaaa aaaaaaa 537

```

&lt;210&gt; 388

&lt;211&gt; 520

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 388

```

aggataattt ttaaaccaat caaatgaaa aaacaaacaa acaaaaaagg aaatgtcatg 60
tgagggtaaa ccagtttga ttccctaat gtggaaaaag taagaggact actcagcact 120
gtttgaagat tgcctctct acagcttctg agaattgtgt tatttcaact gccaaagtga 180
ggacccctc ccaacatgc ccagccac ccctaagcat ggtccctgt caccaggcaa 240
ccaggaaact gctacttgg gacctacca gagaccagga gggtttgggt agctcacagg 300
acttcccca cccagaaga ttacatccc atactagact catactcaac tcaactaggc 360
tcatactcaa ttgatggta ttgacaatt ccatttctt ctggttatta taaacagaaa 420
atctttctc ttctcattac cagtaaaggc tcttggctc tttctgttg aatgattct 480
atgaacttgt cttattttaa tgggtgggtt ttttctggt 520

```

&lt;210&gt; 389

&lt;211&gt; 365

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 389

```

cgttgcccca gtttgacaga aggaaggcg gagcttattc aaagtctaga gggagtggag 60
gagttaaagg tggatttcag atctgcttg ttccagccgc agtgtgccc ctgtccccc 120
aacgacttcc caataatct caccagggcc ttccagctca ggcgtctag aagcgtcttg 180
aagcctatgg ccagctgtct ttgtgttccc tctcaccgca ctgtctcac agctgagact 240
cccaggaaac ctccagacta ccttctctg ccttcagcaa gggcgcttg ccacattctc 300
tgagggtcag lggaaagacc tagactccca ttgctagagg tagaaagggg aagggtgctg 360
qqqag 365

```

&lt;210&gt; 390

&lt;211&gt; 221

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc feature

&lt;222&gt; (1)...(221)

&lt;223&gt; n = A, T, C or G

&lt;400&gt; 390

```

tgcctctcca tcttgcccc gacttctctg tcaggaaagt ggggatggac cccatctgca 60
tacaagntt ctcatgggtg tggaaactct ctgcttgagg ttccaggaag gctctgggt 120
gctctangag tctgannga ntggtgccc cantntgaa naaggaaagg cggagcttat 180
tcaaaagtct gagggagtgg aggagtlag gctggatttc a 221

```

&lt;210&gt; 391

&lt;211&gt; 325

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(325)  
 <223> n = A,T,C or G

<400> 391  
 tggagcaggt cccgaggcct ccctagagcc tggggccgac tctgtgncga tgcangcttt 60  
 ctctcgcgcc cagcctggag ctgctcctgg catctacca caalcagncg aggcgagcag 120  
 tagccagggc actgctgcc aagccagtc cnnataccat catgtnaccc ggtgngctct 180  
 naanctngat ntccanagcc ctaccocatn tagttctgct ctcccaccgg ntaccagccc 240  
 cactgcccag gaatectaca gccagtaacc tglcccagcg tctctaccta ccagtaacgat 300  
 gagacctcug gctactacta tgacc 325

<210> 392  
 <211> 277  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(277)  
 <223> n = A,T,C or G

<400> 392  
 atattgitta actccttctt ttatatcttt taacattttc atggngaaag gtccacatct 60  
 agtctcactt nggcnagngn ctctactttg agtctcttcc ccggcctggn ccagtnghaa 120  
 antaccanga accgncatgn cttaanacn ncctggtttc tgggttnntc aatgactgca 180  
 tgcagtgca caccctgtcc actacgtgat gctgtaggat taaagtctca caglgggcgg 240  
 ctgaggatac agcgcccggt cctgtgttgc tggggaa 277

<210> 393  
 <211> 566  
 <212> DNA  
 <213> Homo sapiens

<400> 393  
 actagtcag tgtggtggaa ttgcggcgcg cgtcgacgga caggtcagct gtctggetca 60  
 gtgatctaca ttctgaagtt gtctgaaaat gtcttcatga tttaattcag cctaaacgtt 120  
 ttgccgggaa cactgcagag acaatgctgt gaggtttcaa ccttagccca tctgcgggca 180  
 gagaaggctc agtttgtcca tcagcattat catgatata ggaactggtta cttggttaag 240  
 gaggggtcta ggagatctgt cctttttaga gacacettac ttatvctgaa glatttggga 300  
 ggttggtttt caaaagtata aatgtcctgt attccgalqa tcatcctgla aacattttat 360  
 catttattaa tcatccctgc ctgtatctat tatttatctc atctctctac gctggaaact 420  
 ttctgctca atglttactg tgcctttgtt ttctgctggt tgtgttcttg aaaaaaaaaa 480  
 cattctctgc ctgagtttta atttttglcc aaagtattt taatctatac aattaaaagc 540  
 ttttgcctat caaaaaaaa aaaaaa 566

<210> 394  
 <211> 384  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(384)  
 <223> n = A,T,C or G

<400> 394  
 gaacatacat gtcccgccac ctgagctgca gtctgacatc atcgcuatca cgggcctcgc 60  
 tgcaaatng gaccgggcca aggetggact gctgggagct gtgaaggagc tacaggccna 120  
 gcaggaggac cgggctttta ggagttttta gctgaglgct ackgtagacc ccaaalacca 180  
 tcccaagatt atcgggagaa agggggcagt atttaccas atccgggttg agcatgacgt 240

gaacatccag tttcotgata aggacgatgg gaaccagccc caggaccaaa ttaccatcac 300  
 aggggtacgaa aagaacacag aagctgccag ggatgctata ctgagaattg tgggtgaact 360  
 tgagcagatg gtttctgagg acgt 384

<210> 395

<211> 399

<212> DNA

<213> Homo sapiens

<400> 395

ggcaaaaactg tgtgacotca ataagacctc gcagatccaa ggtcaagtat cagaagtgc 60  
 tctgaccttg gactccaaga cctacatcaa cagcctggct atattagatg atgagccagt 120  
 tatcagaggt ttcacattg cggaaattgt ggagtctaag gaatcatgg cctctgaagt 180  
 attcacgtct ttccagtacc ctgagttctc tatagagttg cctaaccacag gcagaattgg 240  
 ccagctactt gtctgcaatt gtatcttcaa gaataccctg gccatccctt tgactgaagt 300  
 caagttctct ttggaaagcc tgggcatctc ctcaactacag acctctgacc atgggacgg 360  
 gcagcctggg gagaccatcc aatcccaaat aaaatgcac 399

<210> 396

<211> 403

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)...(403)

<223> n = A,T,C or G

<400> 396

tggagttntc agtgcaasca agccataaag ctccagtagc aaattactgt ctacacagaa 60  
 gacattttca acttctgtct cagctgctga taanacaaat catgtgttta gcttgactcc 120  
 agacaaggac aacctgttcc ttcatnaactc tctagagaaa aaaggagtt gttagttagt 180  
 actaasaaaa gtggatgaat aatctggata tttttctaa aaagattcct tgaacacal 240  
 taggaasatg gagggcctta tgatcagaat gctagaatta gtccattgtg ctgaagcagg 300  
 gttaggggga gggagtgagg gataaagaa ggaaaaaaag aagaytgaga aaacctattL 360  
 atcaagcag gtgctatcac tcaatcttag gccctgctct ttt 403

<210> 397

<211> 100

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)...(100)

<223> n = A,T,C or G

<400> 397

actagtnacg tgtggtggaa ttccgggccc cgtcgaccta naanccatcl ctatagcaaa 60  
 tccatccccg ctccgtgttg gtnacagaat gactgacaaa 100

<210> 398

<211> 278

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)...(278)

<223> n = A,T,C or G

<400> 398

129

```

gaggccgcgt egacagcagt tccgcccagc ctcgcccctg ggtggggatg tgcgtgcacgc 60
ccacctggac atctggaagt cagcggcctg gatgaaagag cggacttcac ctggggcgat 120
tcactactgt gcctcgacca gtgaggagag ctggaccgac agcgagggtg actcatcatg 180
ctcggggcag cccatccacc tgtggcagtt cctcaggag ttgctactca agccccacag 240
ctatggcgc ttcattiangt ggcacacaa ggaagagg 278

```

<210> 399  
 <211> 298  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc feature  
 <222> (1)...(298)  
 <223> n = A,T,C or G

```

<400> 399
acggaggtgg aggaagcgnc cctgggatcg anaggatggg tccatgcatt gacccctcnc 60
ggggtgccng catggagcgc atgggcggcg gcctggggcca cggcatggat cgcgtgggct 120
ccgagatcga gcgcattggc ctggtcatgg accgatggg ctccgtggag cgcattggct 180
ccggcattga gcgcattggc ccgctgggoc tgcaccacat ggctccanc attgancgca 240
tgggcccagac catggagcgc attggctctg gcgtggagcn catgggtgcc ggcattggg 298

```

<210> 400  
 <211> 348  
 <212> DNA  
 <213> Homo sapiens

```

<400> 400
acatcaacta ctctctcatt ttaaggtatg gcagttccct tcatcccttt ttectgccll 60
gtacatgtac atgtatgaaa ttctctcttc ttaccgaact ctctccacac atcacaaggt 120
caaagaacca cagcgttaga agggtaagag ggcacctat gaaatgaaat ggtgatttct 180
tgagtctctt ttctccacgt ttaaggggoc atggcaggac ttagagttgc gagttaagac 240
tgcagagggc tagagaatta ttctatcacg gctttgagge caccatgtc acttatcccg 300
tataccctct caccatcccc ttgtctactc tgatgcccc aagatgcaac tgggcagcta 360
gttggcccca taattctggg cctttgttgt ttgttttaat tacttgggca tccaggaag 420
gtttccagtg atctctacc atgggcccc ctccgtggat caagccctc ccaggccctg 480
tccccagccc ctctgcccc agcccccccg cttgccttgg tgcacgccc tccattggg 540
agcaggtt 548

```

<210> 401  
 <211> 355  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc feature  
 <222> (1)...(355)  
 <223> n = A,T,C or G

```

<400> 401
actgtttcca tgttatgttt ctacacattg ctacctcagt gctcctggaa acttagcttt 60
tgtgtctccc aagtagtcca ccttcattta actctttgaa actgtatcat ctttgccaag 120
taagagtggg ggcctatttc agctgctttg acaaaatgac tggctcctga cttaacgttc 180
tataaatgaa tgtgctgaag caaagtgcgc atggtggcgg cgaagaagan aaagatgtgt 240
tttgttttgg actctctgtg gtcccttcca atgctgnggg ttccaacca ggggaagggt 300
cccttttgc tttgccaagt ccataacct gagcactact ctaccatggn tctgc 355

```

<210> 402  
 <211> 407  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(407)  
 <223> n = A, T, C or G

<400> 402  
 atggggcagg ctggataaag aaccaagac cactggagta tctgtctctc aagaaaccca 60  
 tctcacatgc ggtggcctac ataggctcaa aataaaggaa tggagaaaaa tatttcaagc 120  
 aeatggaaaa cagaaasaag cagggtgttg actctactt tctgacaaaa cagactatgc 180  
 gaataaagat aaaaaagaga aggcattac aaagggtggtc ctgacctttg ataatctctc 240  
 ttgcttgata ccaacctggg ctgttttaat tgcacaaacc aaaggataa ttgtctgagg 300  
 ttgtggagct tctccctgc agagagtcct tgatctcca aattttggtt gagatgtatg 360  
 gntgatattg ctgacaaact cttttctgaa gttttactca tttccaa 407

<210> 403  
 <211> 303  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(303)  
 <223> n = A, T, C or G

<400> 403  
 cagtatttat agcnaactg aaaaactagt agcaggcaag tctcaaatcc aggcaccaaa 60  
 tcttaagcaa gagccatggc atggtgaaa tgcacaaaggc gagctgaggc aatctacaaa 120  
 tagagaacaa gaactactca gtcatgaaca aaaggcaga caccacatg gatctcatgg 180  
 gggatggat attgtaatta tagagcagga agatgcacgt gatcgicatt tggcacaaca 240  
 tcttaacaac gaccgaaccc cattatttac ataaacctcc attcggtaac catgttgaaa 300  
 gga 303

<210> 404  
 <211> 225  
 <212> DNA  
 <213> Homo sapiens

<400> 404  
 aagtgttaact tttaaaaatt tagtgggttt tgaattctt tagaggaaag taaaggaaaa 60  
 attgtlaatg cactcattta ccttlacatg gtgaaagtct tctcttgatc ctacaaacag 120  
 acattttcca ctctgtlctc cctgttgtt aagtgtatca gatgtgttgg gcatgtgaat 180  
 ctcccaagtgc clgtgtata aataaagtat ctttatttca ttcct 225

<210> 405  
 <211> 334  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(334)  
 <223> n = A, T, C or G

<400> 405  
 gagctgttat actgtgagtt ctactaggaa atcatcaaat ctgagggttg tctggaggac 60  
 ttcaatcac ctcaccccat agtgaatcag ctccagggg gtccagtccc tctccttact 120  
 tcatcccat cccatgcaa aggangaccc tccctccttg gtccacagcc ttctctagga 180  
 ttccagtgc ctccagaca gagtgggtta tgttttcagg tccatccttg ctgtgagttg 240  
 ctggtgcggt tatgcctcca gcttctgctc agtgcctcat ggcagttgc cagcccatgt 300  
 cactctcac tctcctcagg tggatccccc cctt 334



<210> 406  
 <211> 216  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(216)  
 <223> n = A,T,C or G

<400> 406  
 ttctacacct aatgagggag ttganatnac atnnaaccag gaaatgcacg gatctcaang 60  
 gaaacsaaca cccaataaac tcggagtggc agactgacaa ctgtgagaca tgcacttgct 120  
 acnaaacaca aatttnatgt tgcacccttg ttctacacc tgtgggttat gacaaagaca 180  
 actgccaaag aatnttcaag aaggaggact gccant 216

<210> 407  
 <211> 413  
 <212> DNA  
 <213> Homo sapiens

<400> 407  
 gctgacttgc tagtatcacc tgcattcatt gaagcacaag aacttcacgc cttgactcat 60  
 gtaaatgcaa taggattaaa aaataaattt gatatacat ggaacacagc aaaaaatatt 120  
 gtacaacatt gcaaccagtg tcagattcta caactggcca ctacaggaagc aagagttaat 180  
 cccagaggtc tatgtcttaa tgtgttatgg caaatggatg tcatgcaagt accttcattt 240  
 ggaatatlgt catttgtcca tgtgacaglt gatacttatt cacatttcac atgggcaacc 300  
 tggcagacag gagaagaatc lcccatgtta aaagacallt attatcttgt ttctctgtca 360  
 tgggagttcc agaaaaagtc aaaaacagaca alggggccagg ttctgtagta aag 413

<210> 408  
 <211> 183  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(183)  
 <223> n = A,T,C or G

<400> 408  
 ggaagctagcc ctcaattcccl ccatntctat gttanccalal ttaatgtell ttgnatttaa 60  
 tnccttaacta gttaatcctt aaagggtan ntaactctta actagtcnct ccattgtgag 120  
 cattatacctt ccagtattcn cttctctntt tatttactcc ttcttggcta cccatgtaet 180  
 ntt 183

<210> 409  
 <211> 250  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(250)  
 <223> n = A,T,C or G

<400> 409  
 cccagcactg ataagutctt lattblotgta agtccctqcta ggaatcacc aaatctgacg 60  
 gtggttttgg ggaactgaac aaacctccctg taatt atc gcltccagtt tctcccccta 120  
 gtccctcctt caaacacata ggaggalccct ccccttclll ctgctcacag ccttatctag 180  
 gcltccacgl gcccccagga cagcgtgggc tatgtttaca gggontcett gctggggggg 240  
 ggantatgc 250

<210> 410  
 <211> 306  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(306)  
 <223> n = A, T, C or G

<400> 410  
 ggctgggttg caagaatgaa atgaatgatt ctacagctag gacttaacct tgaatggaa 60  
 agtcttgcaa tcccatctgc aggatccgtc tgtgcacatg cctctgtaga gagcagcatt 120  
 cccagggacc ttggaacacg ttggcactgt aagggtgctt ccccccaaga cacatcctaa 180  
 aagggtgtgt aatggtgaaa accgcttcc tctttattgc cccttcttat ttatgtgaac 240  
 nactgggttg cttttttitgn atctttttta aactggaaag ttcaattgng aaaatgaata 300  
 tentgc 306

<210> 411  
 <211> 261  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(261)  
 <223> n = A, T, C or G

<400> 411  
 agagatattn cttaggttaa agttcataga gtcccatga actatatgac tggccacaca 60  
 ggatcttttg tatttaagga ttctgagatt ttgcttgagc aggattagat aaggctgttc 120  
 tttaatgtc tgaatggaa cagatttcaa aaaaaaaccc cacaatutag ggtgggaaaca 180  
 aggaaggaaa gatgtgaata ggctgatggg caaaaaacca atttaccat cagttccagc 240  
 ctctctcaa ggnagggcaa a 261

<210> 412  
 <211> 241  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(241)  
 <223> n = A, T, C or G

<400> 412  
 gttcaatgtt acctgacatt totacaacac ccactcacc gatgtattcg ttgccagtg 60  
 ggaacatacc agootgaatt tggaaaaaat aatttgtttt cttgccagg aaatactacg 120  
 actgactttg atggctccac aaacataacc cagtgtaaaa acagaagatg tggnggggag 180  
 ctgggagatt tcaactgggtz cattgaattc ccaactacc cangcaatta ccuagccaac 240  
 a 241

<210> 413  
 <211> 231  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(231)  
 <223> n = A, T, C or G

<400> 413  
 aactcctaca atccaagtga ctcatctgtg tctttgaato ctttccactg tctcatclcc 60  
 ctcatccaag tttctagtao ctctcctttg ttgtgaagga taatcaaacg gaacacacaa 120  
 aagtttactc tctcatttg gaacctaaaa actctottct tctgggtct gagggctcca 180  
 agaatccttg aatcattct cagatcattg gggacaccaa atcaggaacc t 231

<210> 414  
 <211> 234  
 <212> DNA  
 <213> Homo sapiens

<400> 414  
 actgtccatg aagcactgag cagaagctgg aggcacacag caccagacac tcacagcaag 60  
 gatggagctg aaaacataac cactctgtc ctggaggcac tgggaagcct agagaaggct 120  
 gtgagccaaag gagggagggt ctctctttgg catgggatgg ggaatgaagta aggagagggg 180  
 ctggaccccc tggaaactga ttcactatgg ggggaggtgt attgaagtcc tcca 234

<210> 415  
 <211> 217  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> {1}...{217}  
 <223> n = A,T,C or G

<400> 415  
 gcaagaggtt agagctgagt atcttttcta cttctttta actttctaag gggcacttct 60  
 caaacacag accaggtagc aaatctccac tctcttaagg ntctaccac cactttctca 120  
 cacctagcaa tagtagaatt cagtctact tctgaggcca gaagaatggt tcagaaaaat 180  
 antggattat aaaaaataac aattaagaaa aataatc 217

<210> 416  
 <211> 213  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> {1}...{213}  
 <223> n = A,T,C or G

<400> 416  
 atgcataat aaagganact gcttcgcttt tagaagacat ctggnetgct ctctgcatga 60  
 ggcacagcag taaagctctt tgattcccag aatcaagaac tctcccttc agactattac 120  
 cgaatgcaag gtggttaatt gaaggccact aattgatgct caaatagaag gatattgact 180  
 atattggaac agatggagtc tctactacaa aag 213

<210> 417  
 <211> 303  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> {1}...{303}  
 <223> n = A,T,C or G

<400> 417  
 aagttctcag gcccatcagg gaagttcaca ctggagagaa gtcatacata tgtactgtat 60

134

```

gtgggaagg ctttactctg agttcaaate ttcaagccca tcagagagtc cacactggag 120
agaagccata caaatgcaat gagtgtggga agagcttcag gagggatcc cattatcaag 180
ttcatctagt ggtccacaca ggagagaacc cctataaatg tgagatatgt ggggaagggt 240
tcantcaagg ttctgtatctt caaatccatc ngagggncca cagtatanen aaacctttta 300
agt 303

```

```

<210> 418
<211> 328
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> {1}...{328}
<223> n = A,T,C or G

```

```

<400> 418
tttttggcgg tgggtggggca ggggaaggga angagtctca ctctgttgcc caggctggag 60
tgcacaggca tgatctcggc tcaactacaac cctgcctcc catgtccaag cgattcttgt 120
gcttcagcct tccctgtagc tagaattaca ggcacatgcc accacaccca gctagttttt 180
gtatttttag tagagacagg gtttcaccat gttggccagg ctggtctcaa actcctnacc 240
tcagnggtca ggtgtgtctc aaactcctga cctcaagtga tctgcccacc tcagcctccc 300
aaagtgtctn gattacaggc cgtgagcc 328

```

```

<210> 419
<211> 389
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> {1}...{389}
<223> n = A,T,C or G

```

```

<400> 419
cctctcaag aaggcctgtg gtcgcctcc cggcaaccaa gaagcctgca gtgcatatg 60
aaccctgagc catggactgg agcctgaaag gcagcgtaca cctgctcct gatcttctgt 120
cttgtttcct ctctgtggt ccattcatag cacagtgtgt gcactgagga ttgtgcagga 180
cgagcaaggc caagctggct caaagagcaa ccagtcaact ctgcaacggg gtgcccagga 240
ccggttctcc agccaccaa ctcactcgct cccgcaaatg gcacatcagt tctctaccc 300
taaaggttag acaaaagggc atctgctttt ctgaagtccl ctgctctatc agccatcag 360
tggcagccac tenggctgtg tggagcgg 389

```

```

<210> 420
<211> 408
<212> DNA
<213> Homo sapiens

```

```

<400> 420
gttctctcta actcctgcca gaaacagctc tctcaacat gagagctgca cccctcctcc 60
tggccagggc agcaagcctt agccttggct tcttgtttct gcttttttcc tggctagacc 120
gaagtgtact agccaaggag ttgaagtitt tgactttggt gtttcggcat ggagaccgaa 180
gtcccattga cacttttccc actgacccca taaagggaat ctcattggca caaggatttg 240
gccaactcac ccagctgggc atggagcagc attatgaact tggagagtat ataagaaaga 300
gatatagaaa attcttgaat ggtcctata aacatgaaca ggtttatatt cgaagcacag 360
acgttgaccg gactttgatg aagtgcctatg acaaacctgg caagcccc 408

```

```

<210> 421
<211> 352
<212> DNA
<213> Homo sapiens

```

<220>  
 <221> misc\_feature  
 <222> (1)...(352)  
 <223> n = A,T,C or G

<400> 421  
 gctcæææaat ctttttactg atnggcattg ctacacaatc attgactatt acggaggcca 60  
 gaggagaatg æggcctggcc tgggagccct gtgcctacta naagcacatt agattatcca 120  
 ttcaactgaca gaacagggtct tttttgggtc cttcttctcc accacnatac acttgacgtc 180  
 ctcccttcttg aagattcttt ggcagtgctc tttgtcataa cccacagggtg tagaaacaag 240  
 ggtgcæacat gaaatttctg ttcctgtagca agtgcattgtc tcacaagttg gcangtctgc 300  
 cactccgagt ttattgggtg tttgtttcct ttgagatcca tgcatttctt gg 352

<210> 422  
 <211> 337  
 <212> DNA  
 <213> Homo sapiens

<400> 422  
 atgccaccat gctggcaatg cagcggggcg tccaaggcct gcattatccag cccaagctgg 60  
 cgatgatcga cggcaaccgt tgcocgaagt tgcgatgcc agcugaagcg gtggtcaagg 120  
 gcgatagcaa ggtgcocggcg atcgcggcg cgctcaatcct ggccaaggctc agccgtgac 180  
 gtgaaatggc agctgtcgaa ttgatctacc cgggtttatg catcggcggg cctæaaggct 240  
 atccgacacc ggtgcæcctg gaagccttgc ægcægtggg gccgæcgcgc attææccgac 300  
 gctttctccg ccggtæcggc lggcctatga æattat 337

<210> 423  
 <211> 310  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc feature  
 <222> (1)...(310)  
 <223> n = A,T,C or G

<400> 423  
 gctcaææaat ctttttactg atatggcatg cctacacaaat cactgactat tagaggccag 60  
 aggagaatga ggcctggcct gggæggcctg tgctctctan æægcncatta gattatccat 120  
 tcaactgacg ææcægglett ttttgggtcc ttcttctccæ ccæcgatata cttgcagtc 180  
 tæcttcttg ægattctttg gcagttgtct ttgtcataac ccæcaggtgt anaæacæagg 240  
 gtgcææcctg æættttctgt ttcgtagcaa gtgcattgtc cacagttgtc aagtctgccc 300  
 tæcgagttta 310

<210> 424  
 <211> 370  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc feature  
 <222> (1)...(370)  
 <223> n = A,T,C or G

<400> 424  
 gctcaææaat ctttttactg ataggæatg ctacacaatc attgactatt agæggccæga 60  
 ggagaatgag gcttggcctæ ggaæccctgt gcttactaga agcacattæ ættalccat 120  
 cactgacæga æcægtcttct tttgggtcct tættctccæ cæcgatææ tggægtcct 180  
 ccttcttgæ æattctttg æægttælett tgtæalæææ cæcægtgtæ gææcæctct 240  
 ggttgaatct cctggaactc cctcattagg lætgææææg cætgætgcat tgcææægt 300  
 cæcæægggtg gææægatca cææcgtgææ ææggæææææ ttcattgtga lææcæggææ 360  
 tæcgtæææg 370

136

<210> 425  
 <211> 216  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc feature  
 <222> (1)...(216)  
 <223> n = A,T,C or G

<400> 425  
 aattgctatn ntttattttg ccactcaaaa taattaccaa aaaaaaaaaa tnttaaata 60  
 taacaacnca acatcaaggc aaananaaca ggaatggntg acntgcata aatnggcoga 120  
 anattatcca ttatnttaag ggttgacttc aggtacaga acacagacaa acatgcccag 180  
 gaggtntca ggacgctcg atgtnttntg aggagg 216

<210> 426  
 <211> 596  
 <212> DNA  
 <213> Homo sapiens

<400> 426  
 otccagtgga ggataaccct gttgcccgg gccgagggtc tccattagge Lctgattgat 60  
 tggcagtcag tgatggaagg gtgttctgat cattccgact gcccgaaggg tgcctggcca 120  
 gctctctgtt ttgctgagtt ggcagtagga cctaatttgt taattaagag tagatggta 180  
 gctgtccttg tatttgatt aacctaatgg ccttcccagc acgactcga ttcagctga 240  
 gacatcacgg caacttttaa tgaatgatt tgaaggcca ttaaggagca ctcccgta 300  
 ttaggcagtt catctgcaat gataacttot tggcagctga gctggtcgga gctgtggccc 360  
 aaacgcacac ttggtttttg gttttgagat acaactctta atcttttagt catgcttgag 420  
 ggtggatggc cttttcagct ttaaccccat ttccactgcc ttggaagtgt agccaggaga 480  
 atacactcat atactcgtgg gcttagaggg cacagcaat gtcattggtc tactgctga 540  
 gtcctgctgg Lcncatccc ggaccttcca tggcgagga cctgggagcc cgtgt 596

<210> 427  
 <211> 107  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc feature  
 <222> (1)...(107)  
 <223> n = A,T,C or G

<400> 427  
 gaagaattca agttaggttt attcaagggt cttacngaga atcctanaco cagynccag 60  
 cccgggaqca qccctanaga gtcctgttt gautgcccgg ctacng 107

<210> 428  
 <211> 38  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc feature  
 <222> (1)...(38)  
 <223> n = A,T,C or G

<400> 428  
 gaacttcna anaangaatt tattcaatat ttacatt

<210> 429

38

<211> 544  
 <212> DNA  
 <213> Homo sapiens

<400> 429  
 ctttgctgga cgggaataaaa gtggacgcaa gcatgaccto ctgaltgagg cgtctgcattt 60  
 attgaagagc ggctgcagcc ctgcgggttc gattaaaato cgggaattgt atagagcgccg 120  
 atatccacga actcttgaag gactttctga tttatccaca atcaaatcat cggtttccag 180  
 tttggatggg ggctcatcac ctgtagaacc tgaattggcc gtggctggaa tccactcgtt 240  
 gccttccact tcagttacac ctcaatcacc atcctctcct gttgggtctg tctgtcttca 300  
 agatactaag cccacatttg agatgcagca gccatctccc ccaattccct ctgtccatcc 360  
 tgatgtgcag ttaaaaaatc tgcctcttca tgatgtcctt gatgttctca tcaagcccac 420  
 gagttagtt caaagcagta ttcaagcatt tcaagagaag ttttttattt ttgctttgac 480  
 aactcaacaa gttagagaga tctgcctatc cagggatitt ttgccagggt gtaggagaga 540  
 ttat 544

<210> 430  
 <211> 507  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(507)  
 <223> n = A,T,C or G

<400> 430  
 cttatmcaa tggggctccc aaacttgyct gtgcagtgya aactccgggg gaattttgaa 60  
 gaacactgac acccatcttc caccocgaca ctctgattta attgggctgc aglgagaaca 120  
 gageatcaat ttaaaangct gccagagtg tctcctggg cagcgttgtg atctttgcca 180  
 ccttctgtag tttatgcaat gcatcatgct atttcatacc taatgaggga gttccaggag 240  
 attcaaccag gatgttctca cncctgtggg ttatgacaaa gacaactgcc aaagaatntt 300  
 caagaaaggag gactgcaggt atatcgttgt ggagaagaag gacccaaaaa agacctgttc 360  
 tgtcagtgaa tggataatct aatgtgcttc tagtaggcac agggctccca ggccaggcct 420  
 cattctctctc tggcctctaa tagtcaatga ttgtgtagcc atgcctatca gtaaaagat 480  
 ttttgagcaa aaaaaaaaaa aaaaaaa 507

<210> 431  
 <211> 392  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(392)  
 <223> n = A,T,C or G

<400> 431  
 gaaatttcag aatggatasa aacaaatgaa gtacaaaata tttcagattt acatagcgat 60  
 aaaaagaaa gcacttctca ggaggactta caaatggaag tacactctan aaccatcate 120  
 tatcatggct aatgttgaga ttagcacagc tgtattattc gtacattgca aacacctaga 180  
 agagatggg aacaaasatc ccaggagttt tgtgtgtgga gtccctgggt ttccaacaga 240  
 catcattcra gcattctgag attaggngga ttggggatca ttctggagtt ggaatgttca 300  
 acaaaagtga tgttgttagg taaaatgtac aacttctgga tctatgcaga cattgaaggt 360  
 gcaatgagtc tggcttttac tctgctgttt ct 392

<210> 432  
 <211> 387  
 <212> DNA  
 <213> Homo sapiens

<220>

138

<221> misc feature  
 <222> (1)...(387)  
 <223> n = A,T,C or G

<400> 432  
 ggtatccnta cataatcaaa tatagctgta gtacatgttt tcattggngt agattaccac 60  
 aatgcaagg caacatgtgt agatctcttg tottatttct ttgtctataa tactgtattg 120  
 ngtaqtccaa gctctcggna gtccagccac tngaaacat gctcccttta gattaacctc 180  
 gtggacnctn ttgttgnatt gtctgaactg tagngccctg tatitttgctt ctgtctgnga 240  
 attctgttgc ttctggggca ttcccttngg atgcagagga ccaccacaca gatgacagca 300  
 atctgaattg ntccaatcac agctgcgatt aagacatact gaaatcgtac aggaccggga 360  
 acaacgtata gaacactgga gtccctt 387

<210> 433  
 <211> 281  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc feature  
 <222> (1)...(201)  
 <223> n = A,T,C or G

<400> 433  
 ttcaactlge anagaanaact gcttcagggn gtgtaaaatg aaaggcttcc acgcagttat 60  
 ctgattcaag aacactaaga gagggacaag gctagaagcc gcaggatgtc tacactatag 120  
 caggcnctat ttgggttggc tggaggagct gtggaaaaca tggagagatt ggcgtctggag 180  
 atcgccgtgg ctattcctcn ttgntattac accagngagg ntctctgtnt gcccaactggt 240  
 tnnaaaaacg ntatacaata atgatagaat aggaacacaa t 281

<210> 434  
 <211> 484  
 <212> DNA  
 <213> Homo sapiens

<400> 434  
 ttttaaaata agcatttagt gctcagtcoc tactgagtag tctttctctc ccctcctctg 60  
 aatttaattc ttccaacttg caatttgcac ggattacaca ttccaactgt atgtatatattg 120  
 tgttgcaaaa aaaaaaaagt gtctttgttt aaaattactt ggtttgtgaa tccatcttgc 180  
 tttttcccca ttggaactag tcattaaccc atctctgaac tggtagaaaa acatctgaag 240  
 agctagtcta tcagcatctg acagggtgaat tggatggctc tcagaaccat ttcaaccaga 300  
 cagcctgttt ctatcctgtt taataaatta gtttgggttc tctacatgca taacaaaccc 360  
 tgcaccaate tgtcacataa aagtctgtga cttagaagttt agtcagcacc cccacczaac 420  
 tttatttttc tatgtgtttt ttgcaacata tgagtggttt gaaaataaag taccatgtc 480  
 tttta 484

<210> 435  
 <211> 424  
 <212> DNA  
 <213> Homo sapiens

<400> 435  
 gggccgctca gaggaggtna ctttctgect tccacgtcct ccttcaagga agccccatgt 60  
 gggtaqcttt caatatcgca ggttcttact cctctgcctc tataagotca aaccacccaa 120  
 cgtacgggca agtaaacccc ctccctcgcc gacttcggaa ctggcgagag ttcagcgca 180  
 atgggctctt ggggaggggg caagatagat gagggggagc ggcatggctc ggggtgacc 240  
 cttggcgaga ggaaaaaggc cacaagaggc gctgccaccg ccactaacgg agatggccct 300  
 ggtagagacc tttgggggtc tggaaacctc ggactcccca tgccttaact ccacactct 360  
 gctatcagas acttaacett gaggatttct tctgttttct actcgcaata aattcagagc 420  
 aacc 424

<210> 436



<211> 667  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(667)  
 <223> n - A,T,C or G

<400> 436  
 accttgggaa naactctcaca atataaaggg tcttagaactt tactccaaat tccaaaaagg 60  
 tcttgcccat gtaatcctga aagttttccc aaggtagcta taaaatcctt ataaagggtgc 120  
 agcctcttctt ggaattcctc tgatttcaaa gtctcactct caagttcttg aaaaacggggg 180  
 eagttcctga aaggcaggta tagcaactga tcttcagaaa gaggaactgt gtgcacccggg 240  
 atgggctgcc agagtaggat aggatccag atgtgacac cttctggggg aaacagggtct 300  
 gccagggttg tcatagcact catcauagtc cgtcacccgt ctgtcctctg aatctaaacc 360  
 tgttcatgtt tataggactc attcaagaat lltctatate tctttcttat atactctcca 420  
 agttcataat gctgtcccat gccagctgg gtgagttggc caaatccttg tggccatgag 480  
 gattccttta tggggtcagt gggaaagggt tcaatgggac ttcggtctcc atgccgaacc 540  
 aocaaagtca caaucttcaa ctcttggct agtacacttc ggtctagcca gaaaaaagc 600  
 agaaacaaaga agccaaggct aaggcttgc gccctgccag gaggagggtt gcagctctca 660  
 tgttgag 667

<210> 437  
 <211> 693  
 <212> DNA  
 <213> Homo sapiens

<400> 437  
 ctacgtctca accctcattt ttaggtaagg aatcttaagt ccaagatat taagtgaactc 60  
 acacagccag gtaaggaaag ctggtttggc acactaggac tctaccalac cgggttttgt 120  
 taaagctcag gttaggaggc tgataagctt ggaagggaact tcagacagct ttttcagatc 180  
 ataaaagata attcttagcc catgtctctt ccagagcag acctgaactg acagcacago 240  
 aggtactcct ctattttcac cctcttgcct tctactctct ggcagtcaga cctgtgggag 300  
 gccatgggag aaagcagctc tctggaatgt tgtacagatc atggactatt ctctgtggac 360  
 catttctcua ggttaacctc ggtgtcactc ttggggggac agccagcctc tttagcttct 420  
 atttgagltt ctgtctgtct tcagtagagg aaacttttgc tcttcacact tcacatctga 480  
 acaccLaact gctgttgcct ctgaggtggt gaaagacaga tatagagctt acagtattta 540  
 tctattttct aggcactgag ggctgtgggg taccttgtgg tgccaaaaca gatcctgttt 600  
 taaggacatg ttgtctcaga gatgtctgta actatctggg ggtctgtgtg gctcctttacc 660  
 ctgcacatg tgctctcttg gctgaaaatg acc 693

<210> 438  
 <211> 360  
 <212> DNA  
 <213> Homo sapiens

<400> 438  
 ctgcttatca caatgaatgt tctcttgggc agcgttgtga tcttltgcac cttcgtgact 60  
 ttatgcaatg catcatgcta ttltcatccct aatgaggggg ttccaggaga ttcaaccagg 120  
 atgttctctac acctgtgggt tatgacaaag accactgcca aagaatcttc aagaaggagg 180  
 actgcaagta tatctggttg agagagagga cccaaaaaaag acctgttctg tcagtgaatg 240  
 gataatctaa tgtgcttola gtaggccacag ggtctccagg ccaggctca ttctcctctg 300  
 gctcttaata qtcataaatt qtgtagccat gctctcagt aaaaagattt ttgagcaaac 360

<210> 439  
 <211> 431  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature

&lt;222&gt; (1)...(431)

&lt;223&gt; n - A,T,C or G

&lt;400&gt; 439

```

gttctnnta actcctgcca gaaacagctc tctcaacat gagagctgca cccctcctcc 60
tggccagggc agcaagcctt agccttggct tcttgtttct gcttttttcc tggctagacc 120
gaagtgtact agccaaggag ttgaagtgtg tgactttggg gtttcggcat ggagaccgaa 180
gtcccattga cacttttccc actgacccca taaaggaaac ctcatggcca caaggatttg 240
gccaaactcac ccagctgggc atggagcagc attatgaact tggagagtat ataagaaaga 300
gatataaaaa attcttgaat gactcctata aacatgaaca ggtttatatt cgaagcacag 360
acgttgaccg gactttgatg agtgctatga caaacctggc agcccgctga cgcggccgcg 420
aatttagtag t

```

431

&lt;210&gt; 440

&lt;211&gt; 523

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 440

```

agagataaag cttaggtcaa agtctcatga gttcccatga actatctaac tggccacaca 60
ggatcttttg tatttaagga ttctgaagatt ttgcttgagc aggatctgat aaggctgttc 120
tttaaatgtc tgaattggaa cagatttcaa aaaaaaaccc cacaatctag ggtgggaaca 180
aggaaggaaa gctgtgaata ggctgctggg caaaaaacca atttaccat cagttccagc 240
cttctctcaa ggaaggcaca agaaaggaga tacagtggag acatctggaa agttttctcc 300
actggaaaac tgcctctctc tgtttttata tttctgttaa aatataatgag gctacagaac 360
taaaaaattaa aacctctttg tgtcctttgg tcttggaaca tttatgttcc ttttaagaa 420
acaaasatca aactttacag aasgatttga tgtatgtaac acatatagca gctcttgaag 480
tatatatatc atagcaata agtcatctga tgagaacaag cta

```

523

&lt;210&gt; 441

&lt;211&gt; 430

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 441

```

gttctctcta actcctgcca gaaacagctc tctcaacat gagagctgca cccctcctcc 60
tggccagggc agcaagcctt agccttggct tcttgtttct gcttttttcc tggctagacc 120
gaagtgtact agccaaggag ttgaagtgtg tgactttggg gtttcggcat ggagaccgaa 180
gtcccattga cacttttccc actgacccca taaaggaaac ctcatggcca caaggatttg 240
gccaaactcac ccagctgggc atggagcagc attatgaact tggagagtat ataagaaaga 300
gatataaaaa attcttgaat gactcctata aacatgaaca ggtttatatt cgaagcacag 360
acgttgaccg gactttgatg agtgctatga caaacctggc agcccgctga cgcggccgcg 420
aatttagtag

```

430

&lt;210&gt; 442

&lt;211&gt; 362

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 442

```

ctaaggaatt agtagtgttc ccatcacttg ttggagtggt gctattctaa aagattttga 60
tttctgggaa tgacaattat attttaactt tgggtgggga aagagttata ggaccacagt 120
cttcacttct gatacttgta aattaatctt ttattgcact tgttttgacc attaaactat 180
atgttttagaa atggtcattt tacggaaaaa ttgagaaatc tctgataata gtgcagaata 240
aatgaattaa tgttttaact aatttctatt gaactgtcaa tgacaaataa aaattctttt 300
tgattatttt ttgttttcat ttaccagaat aaaaaactag aattaaaagt ttgattacag 360
tc

```

362

&lt;210&gt; 443

&lt;211&gt; 624

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(624)  
 <223> n = A,T,C or G

<400> 443  
 tttttttttt gcaacacaaat atacatcaca gtgaaatgtg taatccttgc aaattgcaag 60  
 ttgaaagaat taaattcaga ggaggggaga gaaagagtac tcagtaggga ctgagcacta 120  
 aatgcttatt ttaaaagaaa tgtaaagago agaaagcaat tcaggctacc ctgccttttg 180  
 tgctggctag tactcgggc ggtgtcagca gcacgtggca ttgaacattg caatgtggag 240  
 cccaaaccac agaaaatggg gtgaaattgg ccaactttct attaaacttg cttcctgttt 300  
 tataaatat tgtgaatnat atcacctact tcaaggggca gttatgaggc ttaaatgaac 360  
 taacgcctac aaacacacta aacatagata acataggtgc aagtactatg tatctgttac 420  
 atggtaaacu tctttattat taagtcacac gctaaaatga atgtgtgtgc atatgcta 480  
 agtacagaga gagggcactt aaaccaacta agggcctgga gggaagggtt cctggaaaga 540  
 ngatgcllgt gctgggtcca aatcttggtc tactatgacc ttggcccaat tatttaact 600  
 ttglccctat ctgctaacca gabc 624

<210> 444  
 <211> 425  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(425)  
 <223> n = A,T,C or G

<400> 444  
 gcacatcatt nntcttgcac tctttgagaa taagaagatc agtaaatagt tcagaagtgc 60  
 gaagctttgt ccaggccctgt gctgtgaacc aatgttttgc ttagaatatag aacaagtaag 120  
 ttcatgtcta tagcataaca caaaatttgc ataagtgtg gtcagcaaat ccttgaatgc 180  
 tgcttaaatgt gagaggttgc taatatcclt tgtgcacac tctaaactcc tgaatgtttt 240  
 gctgtgctgg gacctgtgca tgccagacaa ggcacagctg gctgaaagag caaccagcca 300  
 cctctgcaat ctgccacctc ctgctggcag gctt.tggttt tgcclctgtl gaagagccaa 360  
 ggaggcacca gggcataagt gactagactt atggtcagac cggccgcgaa tttagtagta 420  
 gtaga 425

<210> 445  
 <211> 414  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(414)  
 <223> n = A,T,C or G

<400> 445  
 catgtttatg nttttggalt actttgggca cctagtgttt ctuaatcgtc tatcattctt 60  
 ttctgttttt caaaagcaga galggccaga gtclcaacaa actgtatctt caagtctttg 120  
 tgaattctt tgcattgtgc agattcttgg atgtagtctt ctttaactcg catataaato 180  
 tgggtgtgtt cagataaato aacagcassa tgttgtgga ttaccatttg gaacattgtg 240  
 aatgaaaaat tgtgtctcta gatlatgla caaataacta tttcctaacc attgatcttt 300  
 ggatttttat aatcctactc acaaatgaat aggcctctcc tottgtattl tgaagcagt 360  
 tgggtgtctg attgataaaa aaaaaaaaag tggcgcggc cgcgaattta gtag 414

<210> 446  
 <211> 631  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> {1}...{631}  
 <223> n = A,T,C or G

<400> 446  
 acaaatagga anaaagtgc agagaacacc acataccttg tccggaacat tacaatggct 60  
 tctgcattgca tgggaagtgt gageattctc tcaatatgca ggagccatct tgcagggtgtg 120  
 atgctgggtta tactggacaa cactgtgaaa azaaggacta cagtgttcta tacgttggtc 180  
 cuggtcctgt acgatttcag tatgtcttaa tgcagctgt gattggaca attcagattg 240  
 ctgtcatctg tgtgggtgtc ctctgcatac caagggccaa actttaggta atagcattgg 300  
 actgagattt gtaaaccttc caaccttcca ggaatgtccc cagaagcaac aqaalttcca 360  
 gacagaaqca aactacaggc cactacagtt cagaacatac aacaagagcg tccacgaggt 420  
 taattctaaq ggaagcatgtt tccagtggtc tggactaccg agagcttggc ciacacata 480  
 cagttattta gacaaagaa taagacaaga gatctacaca lgttgcttg cttttgtgt 540  
 aatctacacc aakgaaaca tgtactacag ctatatttga tctgtatgg atatatattg 600  
 aatagtatac attgltctga tgtttttct g 631

<210> 447  
 <211> 585  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> {1}...{585}  
 <223> n = A,T,C or G

<400> 447  
 ccttgaggaa antntacaa tataaagggt cgtagacttt actccaaatt ccaaaaagggt 60  
 cctggccatg taalactgaa agttttccca aggtagctat aaatcctta taagggtgca 120  
 gcclettctg gaattcctct gatttcaaag tctcactctc aagtctctga aaacgagggc 180  
 agttcctgaa aggcaggtat agcaactgat ctccagaaag aggaactgtg tgcaccggga 240  
 tgggctgcca gaggtaggata ggattccaga tcttgacacc ttctggggga aacagggtctg 300  
 ccagggtttgt catagcactc atcaaaagtc ggtcaacgtc tgtgcttcca atataaacct 360  
 gttcatgttt ataggactca ttcaagaatt ttctatatct ctittctata tactctccaa 420  
 gttcataatg ctgctccatg cccagctggg tgagttggcc aaatccttgt ggccatgagg 480  
 attcctttat ggggtcagtg ggaaaggtgt caatgggaat tgggtotoca tgcggaaca 540  
 ccaagtcac aaacttcaac tcttggtc gtacacttgg gtcta 585

<210> 448  
 <211> 93  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> {1}...{93}  
 <223> n = A,T,C or G

<400> 448  
 tgcactgtgg tcaattctgan nncogaactg accntgccag ccttgccgan ggccnccat 60  
 ggtccctag tgcctggag agganggggc tag 93

<210> 449  
 <211> 706  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature

143

&lt;222&gt; (1)...(706)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 449

```

ccaagttcat gctntgtgct ggacgctgga caggggggcaa aagcnnittgc tegtgggtca 60
ttctgancac cgaactgacc atgccagccc tgcogatggt cctccatggc tccctagtgc 120
cctggagagg aggtgtctag tcagagaqta gtccctggaag gtggcctctg ngaggagcca 180
cggggacagc atcctgcaga tggtcyggcg cgtcccatlc gccattcagg ctgcgcact 240
gttgggaagg gcgatcaglg cgggcctott cgtctattac ccagclggcg aaggggqgat 300
gtgctqcaag gcgatcagg tgggttaacgc cggggtllc ccagtcncca cgttgtaaaa 360
cgaacgucag tgaattgaal ttagglgaen ctatagaaga gctalgacgt cgcctgcacg 420
cgtacgttae cllggatcct ctagagcggc cgcctactac tectaaattc gtcggcgcgt 480
cgaacglggg tcncactga gagagtggag agtgacatgt gctggacnct gtccatgaaq 540
cactgaacag aagctggggg cacaacgcnc cagacactca cagctactca ggaggtgag 600
aacaggttga acctgggagg tggaggttgc aatgagctga gatcaggccn ctgcneccca 660
gcctggatga cagagtgaas ctccatctta aaaaaaaaaa aaaaaa 706

```

&lt;210&gt; 450

&lt;211&gt; 493

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 450

```

gagacggagt gtcactctgt tgcacaggct ggagtgcagc aagacactgt ctaagaaaaa 60
acagttttaa aaggtaaaaa aacataaaaa gaaatatcct atagtggaaa taagagagtc 120
aaatgagggt gagaacttta caaagggtac ttacagacat gtgcacaata tcactgcatg 180
agcctaagta taagaacaa ctttggggag aaacctcat ttgacagtga ggtacaatto 240
caagtcagggt agtgaatgg gtggcattaa acacaaatta atcctgccag ctgaaaugca 300
agagacactg tcagagaqti aaaaagtgg ttctatccat gaggatgatt caccagtcttc 360
tcaggtcaac acatctgtga actcacagac caagttctia aacacactgt ccaactctgc 420
lacacatcag aatcacctgg agagctttac aaactcccat tgcagagggt cgacgcggcc 480
gcgaatttag tag 493

```

&lt;210&gt; 451

&lt;211&gt; 501

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(501)

&lt;223&gt; n = A,T,C or G

&lt;400&gt; 451

```

gggcgggtcc cattedgcaal tcaggctgcy caactgttgg gaagggcgat cggctgcgggc 60
ctcllrgcta ttacgccagc tggcgasagg gggatgtgct gcaagggcat taagttgggt 120
aacggccagg ttttccagc cncgacgttg taaaacgacg gccagtgaat tgaatttagg 180
lgacnetata gaagagctat gacgtcgcat gcacgcgtac gtaagcttgg atcctctaga 240
ggcgccgcoo actactacta aattcgcggc cgcgtcgacg tgggatccnc actgagagag 300
tggagagtga catgtgtctg acnetgtcca tgaagcactg agcagaagct ggagggcaca 360
cgncccagac actcacagct actcaggagg ctgagaacag gttgaacctg ggaggtggag 420
gttgcaatga gctgagatca ggccnctgcn cccagcatg gatgacagag tgaactcca 480
tcttaaaaaa aaaaaaaaaa a 501

```

&lt;210&gt; 452

&lt;211&gt; 51

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)...(51)

<223> n = A,T,C or G

<400> 452

agacgggttcc accnttacaa cncctttttag gatgggnntt ggggagcaag c

51

<210> 453

<211> 317

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)...(317)

<223> n = A,T,C or G

<400> 453

tacatcttgc tttttcccca ttggaactag tcattaaccc atctctgaac tggtagaaaa 60  
acatctgaag agctagtcta tcagcatctg gcaagtgaat tggatgggtc tcagaaccat 120  
ttcaccana cagcctgttt ctatcctgtt taataaatta gtttgggttc totacatgca 180  
taacaaaccc tgcctcaatc tgtcacataa aagtctgtga ctigaagttt antcagcacc 240  
cccacaaac tttatttttc tatgtgtttt ttgcaacata tgagtgtttt gaaaataagg 300  
taccatgtc tttatta 317

<210> 454

<211> 231

<212> DNA

<213> Homo sapiens

<400> 454

ttcagaggtac aatcaactct cagagtgtag ttctcttcta tagatgagtc agcattaata 60  
taagccacgc cagctcttgc aaggagtctt gaattctctt ctgctcactc agtagaacca 120  
agaagaccaa attcttctgc atcccagctt gcaaacasaa ttgttcttct aggtctccac 180  
cttctctttt tcagtgttcc aaagctcctc acaatttcat gaacaacagc t 231

<210> 455

<211> 231

<212> DNA

<213> Homo sapiens

<400> 455

taccaaagag ggataataa tcagtctcac agtaggggtc accctctctc aagtgaaaaa 60  
cattgttccg aatgggtttt ccacaggcla cacacacaaa acaggaaaca tgccaagttt 120  
gttccaacgc attgatgact lctccaggga tcttcttttg gcatcgacca cattcagggg 180  
caaggaeatt ctcctagcac agctcacaat acagggtctc tttctctct a 231

<210> 456

<211> 231

<212> DNA

<213> Homo sapiens

<400> 456

ttggcaggta cctttacaaa gaagacacca taccttatgc gttattaggt ggaataatca 60  
ttccattcag tattatcgtt attattcttg gagaacccct gtctgtttac tgtaaccttt 120  
tgcactcaaa ttcttttate aggaataact acatagccac tatttacaan gccattggaa 180  
cctttttatt tggtycagct gctagtcagt cctgactga cattgccaag t 231

<210> 457

<211> 231

<212> DNA

<213> Homo sapiens

<220>

145

<221> misc\_feature  
 <222> {1}...{231}  
 <223> n = A,T,C or G

<400> 457  
 cgaggtaccc aggggtctga aaatctctnn ttantagtc gatagcaaaa ttgttcatca 60  
 gcaatccctta atatgatctt gctataatta gatttttctc cattagagtt catacagttt 120  
 tatttgattt tattagcaat ctctttcaga agacccttga gatcattaag ctttqtatcc 180  
 agttgtctaa atogatgcct catttctctt gaggtgtcgc tggcttttgt g 231

<210> 458  
 <211> 231  
 <212> DNA  
 <213> Homo sapiens

<400> 458  
 aggtcttggtt cccccactt ccactccctt ctactctctc taggactggg ctgggccaaag 60  
 agaagagggg tggttagggg agccgttggg acctgaagcc ccacctcta ccttccctca 120  
 acacctctac cttgggtaac agcatttggg attatcattt gggtatgagta gaatttccaa 180  
 ggtccctgggt taqacatttt gggggggccag ccccaggag aagaagattc t 231

<210> 459  
 <211> 231  
 <212> DNA  
 <213> Homo sapiens

<400> 459  
 ggtaccgagg ctgctgaca cagagaaacc ccaacggcag gaaagggaatg gtcagccaca 60  
 ccttcggcga acctgtgtg gccacaccgt cctaacggga caggacagag agacagagca 120  
 gccctgcaat gttttccctc caccacagcc atcctgtccc tcattggctc tgtgctttcc 180  
 actatacaca gtcacggctc cactgagaaa caaggaggag caccctccac a 231

<210> 460  
 <211> 231  
 <212> DNA  
 <213> Homo sapiens

<400> 460  
 gcaggataaa catgotgcaa caacagatgt gactaggaac ggccgggtgac atggggaggg 60  
 cctatcacc cttcttggg ggtgtgttct tcacagtgt catgaagcct agcagcaaat 120  
 cccacctccc cacaagcaca cggccagcct ggagcccaaa gaagggtcct cctgcaacca 180  
 gtggagcttg gtccagcctc cagtccaccc ctaccaggct taaggataga a 231

<210> 461  
 <211> 231  
 <212> DNA  
 <213> Homo sapiens

<400> 461  
 cqaggtttga gaagctctaa tgtgcagggg agccgagaag caggcggcct agggagggtc 60  
 gcgtgtgtct cagaagagtg tgtgcatgcc agaggggaaa caggcgcctg tgtgtcctgg 120  
 gtggggttca gtgaggagtg ggaaatttgt tcagcagaac caagccgttg ggtgaataag 180  
 agggggattc catggcactg atagagccct atagtttcag agctgggaat t 231

<210> 462  
 <211> 231  
 <212> DNA  
 <213> Homo sapiens

<400> 462  
 aggtaccctc attgtagcca tgggaattt gatgttcagt ggggatcagt caattaaatg 60  
 gggtcattga agtataaaa ttaaaaaaa aagaatcctt gcccattctt atgtgatgtg 120

146

gaagaactgt tagagagacc aacagggtag tgggttagag atttccagag tcttacattt 180  
tctagaggag gtatttaatt tcttctcact catccagtgt tgtatttagg a 231

&lt;210&gt; 463

&lt;211&gt; 231

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 463

tactccagcc tggtagacaga gcgagacct atcacggccc cccaccccac caaaaaaaaa 60  
actgagtaga caggtgtcct ctggcatgg taagtcttaa gtccctccc agatctgtga 120  
catttgacag gtgtcttttc ctctggacct cgggtgtccc atctgagtga gaaaaggcag 180  
tggggagggtg gatcttcacg tcgaagcggc atagaagccc gtgtgaaaag c 231

&lt;210&gt; 464

&lt;211&gt; 231

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 464

gtactctaaag alllttatcta agttgcccllt tctgggtggg aaagtttaac cttagtgact 60  
aaggacatca catatgaaga atgtttaagt tggagggtggc aacgtgaatt gcaaacaggg 120  
cctgcttcag tgaclgtgtg cclgtagtcn cagctactcg ggagtctgtg tgaggccagg 180  
ggtgcacagc caccagctag atgctctgta acttctagge cccattttcc c 231

&lt;210&gt; 465

&lt;211&gt; 231

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 465

catgttgttg tagctgtggc aatgctggct gaatctcaga cagggttaac tttagctcct 60  
gtggcaaat agcaacaaat tctgacatca tatttatggc ttctgtatct ttgttgatga 120  
aggatggcac aatttttgc tgtgttcata atatactcag attagttcag ctccatcaga 180  
taaaactggag acctgcagga cattagggtg gtgttgtagc tctggtaatg a 231

&lt;210&gt; 466

&lt;211&gt; 231

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 466

caggtaacct ttccattgg atactgtgct agcaagcatg ctctccgggg tttttttaat 60  
ggccttcgaa cagaacttgc cacataacca ggtataatag ttcttaacat ttgcccaggc 120  
cctgtgcaat caaatattgt ggagaattcc cttagctggag aagtcacaaa gactatagge 180  
aataatggag accagtcaca caagatgaca accagtcgtt gtgtgaggct g 231

&lt;210&gt; 467

&lt;211&gt; 311

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 467

gtacaccctg gcaagatcca atctgaactg gtccggcact catctttcat gagatggatg 60  
tggtagcttt tctccttttt catcagact cctcagcagg gagcccagac cagcctgcac 120  
tgtccttae cagaaggctt tgagattcta agtgggaatc atttcagtga ctgtcatgtg 180  
gcctgggtct ccgcvaagc lcgtaatgag actatagcaa ggcggtctgt ggacgtcagt 240  
tgtgacctgc tgggcctccc aatagactaa caggcagtg cagttggacc caagagaaga 300  
ctgcagcaga c 311

&lt;210&gt; 468

&lt;211&gt; 3112



&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 466

```

cattgtgttg ggagaaanaac agggggggaga tttgtgtggc tgcagccgag ggagaccagg 60
aagatctgca tgggtgggaag gacctgatga tacagagltt gataggagac aattaaaggc 120
tggaaaggcac tggatggcctg atgatgaagt ggaactttcaa actggggcac tactgaaccg 180
atgggatggc cagagacaca ggagctgagt tggagcaagc lcaataacaa agtgggttcaa 240
cgaagacttg gaattgcctg gagctggagc tgaagtttag cccaattgtt tactagttga 300
gtgaatgtgg atgatggat gatcatttct catctclgag cctcagggtt cccatccata 360
aatgggata cacagtatga tctataaagt gggatatagt atgatctact tcaatgggtt 420
atttgaaggga tgaattgaga taatttatct caggtgccta gaacaatgcc cagattagta 480
catttgggtg aactgagaa tggcataaca ccaattttaa tatatgtcag atgttactat 540
gattatcatt caatctcctg gttttgtcat ggcccaattt atctcactt gtgctcaac 600
aaattgaact gttacaaag gaatctctgg tcttgggtaa tggctgagca ccactgagca 660
tttccattcc agttggcttc ttgggtttgc tagctgcato actagtcato ttaataaat 720
gaagttttaa catttctcca gtgatttttt tatctcacct ttgaagatac tatgttatgt 780
gattaaataa agaacttgag aagaacaggt ttcattaaac ataaaaatcaa tgtagacgca 840
aattttctgg atgggcaata ctatgttcca caggaaatgc tttaaaatat gcagaagata 900
attaaatggc aatggacaaa gtgaaaaact tagacttttt tttttttttt ggaagtatct 960
ggatgttctt tagtcaacta aaggagaact gaaaaatagc agtgaagtcc acataatcaa 1020
acctgtgaga ttaaggctct ttgtggggaa ggacaaagat ctgtaaattt acagtttctt 1080
tccaaagcca acgtcgaatt ttgaaacata tcaagctctt tcttcaagac aaataatcta 1140
tagtacatct ttcttatggg atgcacttat gaaaaatggt ggctgtcaac atctagtcac 1200
tttagctctc aaaaatggtt catttaagag aagtttttag aatctcatat ttattctgt 1260
ggaaggacag catttgtgct tggactttat aggccttcta ttcactcaa taagtgaaga 1320
ataaagaugg ctgctgactt taacatctga gggcnaacat ctgctgaat ctgctgaat 1380
aacatcacta gaaacagcaa gatgcacaa taatgtctaa gtatgcact gtllllycac 1440
attlccagcc cttttaaala tccacacaca cagggaagca aaaaaggagc acagagatcc 1500
ctgggagaaa tgcacggccg ccactctggg tcatcgatga gcctcgccct gtgctgggtc 1560
ccgcttgtga ggggaaggca ttagaaaatg aattgatgtg ttccttaaaag gatgggcagg 1620
aaaacagatc ctgttgtgga tatttatattg aacgggatta cagatttgaa atgaagtcac 1680
aaagttagca ttaccaatga gaggaaaaa gacgagaaa tcttgatggc ttcaaaagac 1740
atgcaacaaa caaatggaa tactgtgatg acatgaggca gccaaagctg ggaggagata 1800
accaaggggc agagggtcag gattctggcc ctgctgccta aactgtgctt tcataacca 1860
atcatttcat atttctaacc ctcaaaaaca agctgttgta atatctgac tctacggttc 1920
ctctgggccc caacattctc cataatcca gccacactca tttttaatat ttagtccca 1980
gatctgtact gtgacatttc taactgttag aataacatta ctcatthttg tcaagaccc 2040
ttcgtgttgc tgcctaatat gtatgtgact gtttttctta aggagtgttc tggcccagg 2100
gatctgtgaa caggctggga agcatctcaa gatctttcca gggttatact tactagaca 2160
cagcatgata attacggagt gaattatcta atcaaacatc tctcagtggt ctllgcccac 2220
actgaaatcc atttccact ttltgtccca ttctcaagac ctcaaatgt cattccatt 2280
atatcacagg allaaacttt ttttttaacc tgggaagaatt caatgttca tgcagctatg 2340
ggatllleat laaatatttt gtlllccagt qcaagatga claatccit tatccctccc 2400
ctttgtttga tttttttlcc agtataaagt taaaatgctt agccttgtac tgaggctgta 2460
tacagccaca gctctccccc atccctccag ccttatctgt catcaccatc aaccctccc 2520
atgcacctaa acaaatota aottgtaatt ccttgaacat gtcaggcata cattattcct 2580
tctgctgag aagctcttcc ttgtctctta aatctageat gatgtaaagt tttgaataag 2640
ttgactatct tacttcatgc aaagaaggga cacatatgag attcatcatc acatgagaca 2700
gcaataacta aaagtgtaat ttgattataa gaggttagat aaatatatga aatgcaagag 2760
ccacagaggg aatgtttatg gggcaogttt gtaagcctgg gatgtgaagc aaaggcaggg 2820
aacctcatag tatcttatat aatatacttc atttctctat ctctatcaca atatccaaca 2880
agcttttcaa agaattcatg cagtgcacaa ccccaaaggt aacctttatc catttcatgg 2940
tgagtgcgct ttgaattttt ggcaaatcat actggtcact tatctcaact ttgagatgtg 3000
tttgtccttg tagttaattg aaagaatatg ggaactcttg tgagccactt tagggttcc 3060
tcttgcaat aaagaattta caaagagcaa aaaaaaaa aaaaaaaa aa 312

```

&lt;210&gt; 469

&lt;211&gt; 2229

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 469

```

agctctttgt aaattcttta ttgccaggag tgaaccctaa agtgggtcac aagagtqccc 60
tattttcttc aatttaactac aaggscacac acatctcaaa gttgagataa gtgaccagta 120
tgatttgcca aaattctaaa gcgcactcac catgaaatgg ataaagggtta cctttgggga 180
tttgcaactgc atgaattctg tgaaaagctt gttggatatt gtgatagaga tagagaaatg 240
aagtatatta tataagatac tatgaggttc cctgcctttg cttcacatcc caggcttaca 300
aactgtcccc ataaacattc cctctgtggc tcttgcatth catatattta tctaaactct 360
tataatcaaa tacactttta gtatttgctg tctcatgtga tttcaaaac tttacatcat tctagattta 480
ccttctttgc atgaagtaag atagtcact caggcagaag gaataatgta tgccctgacat gttcaaggaa 540
agagacaagg aagagcttct caggcagaag gaggggttga tgggtgatgac agataaggct 600
ttacaagtta gattttgttt aggtgcatgg cagcctcagt acaaggctaa gcattttaac 660
ggagggaatg ggagaggctg tggctgtata cagcctcagt gagggataaa ggacttagtc atctttgcac 720
tttatactgg aaaaaaaatc aaacaaaggg gagggataaa ggacttagtc atctttgcac 780
tggaatacaa aatattgtaat taaattccca tagctgcatt tggaaatgaca ttttgaggctc ttgagaatgg 840
ttaaaaaaaa agttaatcct ttccagatg ggcaagaca ctgaggatga tgttgattag 900
gcacaaaaat gggaaatgaa ttccagatg ggcagagca ctgaggatga tgttgattag 960
ataattcact ccgtaatgat catgctgtgt gctagtatg ataaccctgg aaagatctg 1020
agatgcttcc cagcctgttc acagatcccc cactccttag gzaaaacagt 1080
cagctacata ttaggcagca acacgaaggg tctttgaaca aaatgagtaa tgttattcta 1140
cagtgtagaa aggtcacagt acagatctgg gaactaaata ttaaaaatga gtgtggtctg 1200
atatatggag aatgttgggc ccagagggaa ccgtagagat cagatattac aacagctttg 1260
ttttgagggg tagaantatg aaatgatttg gttatgaacg caccgttlaq gcagcagggc 1320
cagaatcctg acccctctgc cctgtgttat cctctcccc aqcttggtgc ctcattgtat 1380
cacagtatte cttttgttt gtgcatgtgc tctctcccc aqcttggtgc ctcattgtat 1440
tttctctcca ttggtaatgc tcaatttggg ccttctctca taagggaacac atcaattcat 1500
ataaalalcc acacacggat ccttctctca taagggaacac atcaattcat 1560
tttctaatgt acacacggat ccttctctca taagggaacac atcaattcat 1620
aagatggcgg ccgggcattt ctcccaggga tctctgtgct tctttttgtg cttcctgtgt 1680
gtgtggatat tttaaaggggc tggaaatgtg caaaaacatg tcaactacta gacattatat 1740
tgtcatcttg ctgtttctag tgatgttaat tatctccatt tcagcagatg ggtggcctca 1800
gatggtaaag tcagcagcct ttcttatttc tcacctggaa atacatacga ccatttgagg 1860
agacaaatgy caagggtgca gcataccctg aacttgagtt gagagctaca cacuatatta 1920
ttggtttcgg agcatcacaa acacccctctc gtgtttctca ctgggcacag aattttaata 1980
cttatttcag tgggtctgtt gcaggaaucg atgagcaat ctacataaag tcaactagtgc 2040
agtgcctgac acacacatt ctgttgaggt cccctctaga gatccacag gtcalatgac 2100
ttcttgggga gcagtggtgc avacclqtaa tcccagact ctgggaggct gaggcaggtg 2160
ggtcacctga gglcaggagh tcaagaccag cctggccaat atgglgaaac cccatctcta 2220
ctaaaaalac aaaaatttag tgggcgtgct ggtgcatgct tgtaatccca gccccaacac 2229
aatgggaatt

```

&lt;210&gt; 470

&lt;211&gt; 2426

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 470

```

gtaaattctt tattgccagg agtgaacct aaagtggctc acaagagtgc cctatttctt 60
tcaatttaact acaggacaa acacatctca aagttgagat aagtgaacag tatgatttgc 120
caaaattcta aagcgcactc accatgaaat ggataaaggf taactttggg gatttgcaat 180
gcataaattc tgtgaaaagc ttgttgagata ttgtgataga gatagagaaa tgaagtatat 240
tatataagat actatgaggt tccctgcctt tgcctcauat cccaggctta canagtgcc 300
ccataaacat tccctctctg gctcttgcat ttcalatatt tatctaaact cttataatca 360
aattacactt ttagtatttg clgctctatg tgatgatgaa lctcatatgt gtcccttctt 420
tgcatgaagt aagatagtc aacttalloa aacillacat cattctagat ttaaggagaa 480
aggaagagct tctcaggcag aaggaataat gtatgcctga catgttcagg gaatlacaa 540
ttagattttg tttagggtgca tgggggaggg tgatggtgat gacagelaaq gctgggggga 600
tggggagagg ctgttgctgt alacagccctc aaggaactta gtcacttttg cactgggaaa 660
tggaaaaaaa atcaaaacaa ggggagggal aaaggactta gtcacttttg cactgggaaa 720
ccccatctgt aattaaattc ccataagctg atgtaacatt gaattcttnc aggttaaaaa 780
aaaaagttaa tctgtgata tttaaggaaat gacattttga ggtcttgaga atgggcacaa 840
aagtgggaaa tgaatttcag tatgggcacaa gacactgagg atgatgttga ttagataatt 900
cactccgtaa tgatcatgct gtgtgctagt aagtataacc ctggaaagat cttgagatgc 960

```

```

ttcccagcct gttcacagat cccctgggcc agaacactcc ttaggaaaaa cagtcagcta 1020
catattaggg agcaacacga agggctcttt aacaaaaatga gtaatgttat tctacagtgt 1080
agaaagggtca cagtacagat ctgggaacta aatattaaaa atgagtgtgg ctggatatat 1140
ggagaatgtt gggcccagaa ggaaccgtag agatcagata ttacaacagc tttgttttga 1200
gggttggaaa tatgaaatga tttggttatg aargcacagt ttaggcagca gggccagaat 1260
cctgacccctc tgcgccgtgg ttatctctct cccagcttgg ctgcctcatg tcatcacagt 1320
attccalttt gtttgttga tgtcttgtga agccatcaag atttctctgt ctgttttcc 1380
ctcattggtat atgctcactt tgtgacttca tttcaaatct gtaatccgt tcaaataaat 1440
atccacaaca ggatctgttt tctgcccct cctttaagga acacatcaat tcattttcta 1500
atgtecttcc ctccaaagcg ggaccaggca cagggcgagg ctcatogagt acccaagatg 1560
ggggccggggc atttctccca gggatctctg tcttccctt tgtgttcc 1620
atatttaaag gggttggaaa tgtgcaaaaa catgtcacta cttagacatt atattgtcat 1680
cttgtctgtt ctagtgtgt taattatctc catttcagca gatgtgtggc ctcatgtgt 1740
aaagtacaga ccttcttta tttctcacct ggaatatcat acgaccattt gaggagacaa 1800
atggcaaggt gtacagatac cctgaacttg agttgagagc tacacacaa atfatttgtt 1860
tccgagcctc acaaacaccc tctctgttcc ttcactgggc acagaatttt aatacttatt 1920
tcagtgggtc gttggcagga acaaatgaag caatctacat aaagtcaata gtgcagtgcc 1980
tgacacacac cattctcttg aggtccctc tagagatccc acaggtcaca tgccttcttg 2040
gggagcagtg gctcacactt gtaatcccg cactttggga ggtgaggca ggtgggtcac 2100
ctgaggtcag gatttcagga ccagcctggc caatatgglg aaaccccatc lclactaaaa 2160
atacaaaaaa tagctgggag tgcctgtgca tgcctgtaat cccagctact tgggaggctg 2220
aggcaggaga attgttgga catgggaggc ggaagttgca gtgagctgta attgtgccat 2280
tgcactcgaa cctgggagac agagtggaac tctgttccca aaaaaaasac aaacaaaaaa 2340
ggcatagtca gatacaacgt gggcggggtg tgtaaataga agcaggatat aaagggcatg 2400
gggtgacggc tttgcccac acaatg

```

<210> 471  
 <211> 812  
 <212> DNA  
 <213> Homo sapiens

```

<400> 471
gaacaaaatg agtaatgtta ttctacagtg tagaaaggtc acaglacaga tctgggaact 60
aatattaaaa aatgagtgtg gctggatata tggagaaatgt tgggcccaga aggaaccgta 120
gagatcagat attacaacag ctttgttttg aggglagaa etelgaatg atttgggtat 180
gaacgcacag tttaggcagc agggccagaa tctgaccctc ctgcccgtg gttctctct 240
cccagcttg gctgcctcat gtcctcacag tattccattt tgtttgttgc atgtcttgtg 300
aagccatcaa gattllctclog tctgtlllcc tctcattggg aatgtcactt ttgtgacttc 360
attcaaatc tgaatcccg ttcaaataaa tatccacaac aggatctgtt ttctgccc 420
tctlltaagg aacacatcaa ttcattttct aatgtccttc cctcacaagc gggaccaggc 480
aagggcgag gctcatngat gacccaagat ggcggccggg cattctccc agggatctct 540
gtcttctctt ttgtcttcc tgtgtgtgtg gatatttaaa ggggttgaa atgtgcaaa 600
acatgtcact acttagacat tataattgtca tcttgtgtt tctagtgtg ttaattatct 660
ccatttcagc agatgtgttg cctcagatgg taaagtcagc agcctttctt atttctcacc 720
tctgtatcat caggctcttc ccaccatgca gatcttctg gtctccctcg gctgcagcca 780
cacaatctc cctctgttt ttctgatgac ag

```

<210> 472  
 <211> 515  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc feature  
 <222> (1)...[515]  
 <223> n = A,T,C or G

```

<400> 472
acggagattt attttctgat attgtctgca tatgtatgtt ttttaagagtc tggaaatagt 60
cttatgactt tctatcata cttattaata aataatacag ccagagaaag atgaaaatgg 120
gttccagaat tatttggtct tgcagcccg tgaatctcag caagaggaa caccaactga 180
caatcaggat attgaacctg gacaagagag agaaggaaca cctccgatcg aagaacgtaa 240

```

150

agtagaaggt gattgccagg aaatggatct ggaasagact cggagtgagc gtggagatgg 300  
 ctctgatgta aaagaaga ctcacaccta tcttaagcat gctcagacta aagaagcagg 360  
 agatgggcag ccataagtta aaaagaagac aagctgaagc tacacacatg gctgatgtca 420  
 cattgaaaat gtgactgaaa atttgaaaat tctctcaata aagtttgagt tttctctgaa 480  
 gaaaaa aaaaaa aaaaaa aaaaaa 515

&lt;210&gt; 473

&lt;211&gt; 750

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 473

Met Trp Asn Leu Leu His Glu Thr Asp Ser Ala Val Ala Thr Ala Arg  
 5 10 15  
 Arg Pro Arg Trp Leu Cys Ala Gly Ala Leu Val Leu Ala Gly Gly Phe  
 20 25 30  
 Phe Leu Leu Gly Phe Leu Phe Gly Trp Phe Ile Lys Ser Ser Asn Glu  
 35 40 45  
 Ala Thr Asn Ile Thr Pro Lys His Asn Met Lys Ala Phe Leu Asp Glu  
 50 55 60  
 Leu Lys Ala Glu Asn Ile Lys Lys Phe Leu Tyr Asn Phe Thr Gln Ile  
 65 70 75 80  
 Pro His Leu Ala Gly Thr Glu Gln Asn Phe Gln Leu Ala Lys Gln Ile  
 85 90 95  
 Gln Ser Gln Trp Lys Glu Phe Gly Leu Asp Ser Val Glu Leu Ala His  
 100 105 110  
 Tyr Asp Val Leu Leu Ser Tyr Pro Asn Lys Thr His Pro Asn Tyr Ile  
 115 120 125  
 Ser Ile Ile Asn Glu Asp Gly Asn Glu Ile Phe Asn Thr Ser Leu Phe  
 130 135 140  
 Glu Pro Pro Pro Pro Gly Tyr Glu Asn Val Ser Asp Ile Val Pro Pro  
 145 150 155 160  
 Phe Ser Ala Phe Ser Pro Gln Gly Met Pro Glu Gly Asp Leu Val Tyr  
 165 170 175  
 Val Asn Tyr Ala Arg Thr Glu Asp Phe Phe Lys Leu Glu Arg Asp Met  
 180 185 190  
 Lys Ile Asn Cys Ser Gly Lys Ile Val Ile Ala Arg Tyr Gly Lys Val  
 195 200 205  
 Phe Arg Gly Asn Lys Val Lys Asn Ala Gln Leu Ala Gly Ala Lys Gly  
 210 215 220  
 Val Ile Leu Tyr Ser Asp Pro Ala Asp Tyr Phe Ala Pro Gly Val Lys  
 225 230 235 240  
 Ser Tyr Pro Asp Gly Trp Asn L u Pro Gly Gly Gly Val Gln Arg Gly  
 245 250 255  
 Asn Ile Leu Asn Leu Asn Gly Ala Gly Asp Pro Leu Thr Pro Gly Tyr

260										265					270				
Pro	Ala	Asn	Glu	Tyr	Ala	Tyr	Arg	Arg	Gly	Ile	Ala	Glu	Ala	Val	Gly				
		275					280					285							
Leu	Pro	Ser	Ile	Pro	Val	His	Pro	Ile	Gly	Tyr	Tyr	Asp	Ala	Gln	Lys				
		290				295					300								
Leu	Leu	Glu	Lys	Met	Gly	Gly	Ser	Ala	Pro	Pro	Asp	Ser	Ser	Trp	Arg				
		305			310					315					320				
Gly	Ser	Leu	Lys	Val	Pro	Tyr	Asn	Val	Gly	Pro	Gly	Phe	Thr	Gly	Asn				
				325					330					335					
Phe	Ser	Thr	Gln	Lys	Val	Lys	Met	His	Ile	His	Ser	Thr	Asn	Glu	Val				
				340				345					350						
Thr	Arg	Ile	Tyr	Asn	Val	Ile	Gly	Thr	Leu	Arg	Gly	Ala	Val	Glu	Pro				
				355			360					365							
Asp	Arg	Tyr	Val	Ile	Leu	Gly	Gly	His	Arg	Asp	Ser	Trp	Val	Phe	Gly				
		370				375					380								
Gly	Ile	Asp	Pro	Gln	Ser	Gly	Ala	Ala	Val	Val	His	Glu	Ile	Val	Arg				
		385			390				395						400				
Ser	Phe	Gly	Thr	Leu	Lys	Lys	Glu	Gly	Trp	Arg	Pro	Arg	Arg	Thr	Ile				
				405					410					415					
Leu	Phe	Ala	Ser	Trp	Asp	Ala	Glu	Glu	Phe	Gly	Leu	Leu	Gly	Ser	Thr				
			420					425					430						
Glu	Trp	Ala	Glu	Glu	Asn	Ser	Arg	Leu	Leu	Gln	Glu	Arg	Gly	Val	Ala				
			435				440					445							
Tyr	Ile	Asn	Ala	Asp	Ser	Ser	Ile	Glu	Gly	Asn	Tyr	Thr	Leu	Arg	Val				
		450				455					460								
Asp	Cys	Thr	Pro	Leu	Met	Tyr	Ser	Leu	Val	His	Asn	Leu	Thr	Lys	Glu				
					470					475					480				
Leu	Lys	Ser	Pro	Asp	Glu	Gly	Phe	Glu	Gly	Lys	Ser	Leu	Tyr	Glu	Ser				
				485					490					495					
Trp	Thr	Lys	Lys	Ser	Pro	Ser	Pro	Glu	Phe	Ser	Gly	Met	Pro	Arg	Ile				
			500					505					510						
Ser	Lys	Leu	Gly	Ser	Gly	Asn	Asp	Phe	Glu	Val	Phe	Phe	Gln	Arg	Leu				
			515				520					525							
Gly	Ile	Ala	Ser	Gly	Arg	Ala	Arg	Tyr	Thr	Lys	Asn	Trp	Glu	Thr	Asn				
			530			535					540								
Lys	Phe	Ser	Gly	Tyr	Pro	Leu	Tyr	His	Ser	Val	Tyr	Glu	Thr	Tyr	Glu				
					550					555					560				
Leu	Val	Gln	Lys	Phe	Tyr	Asp	Pro	Met	Phe	Lys	Tyr	His	Leu	Thr	Val				
				565					570					575					
Ala	Gln	Val	Arg	Gly	Gly	Met	Val	Ph	Glu	Leu	Ala	Asn	Ser	Il	Val				
				580				585					590						

Leu Pro Phe Asp Cys Arg Asp Tyr Ala Val Val Leu Arg Lys Tyr Ala  
 595 600 605  
 Asp Lys Ile Tyr Ser Ile Ser Met Lys His Pro Gln Glu Met Lys Thr  
 610 615 620  
 Tyr Ser Val Ser Phe Asp Ser Leu Phe Ser Ala Val Lys Asn Phe Thr  
 625 630 635 640  
 Glu Ile Ala Ser Lys Phe Ser Glu Arg Leu Gln Asp Phe Asp Lys Ser  
 645 650 655  
 Asn Pro Ile Val Leu Arg Met Met Asn Asp Gln Leu Met Phe Leu Glu  
 660 665 670  
 Arg Ala Phe Ile Asp Pro Leu Gly Leu Pro Asp Arg Pro Phe Tyr Arg  
 675 680 685  
 His Val Ile Tyr Ala Pro Ser Ser His Asn Lys Tyr Ala Gly Glu Ser  
 690 695 700  
 Phe Pro Gly Ile Tyr Asp Ala Leu Phe Asp Ile Glu Ser Lys Val Asp  
 705 710 715 720  
 Pro Ser Lys Ala Trp Gly Glu Val Lys Arg Gln Ile Tyr Val Ala Ala  
 725 730 735  
 Phe Thr Val Gln Ala Ala Ala Glu Thr Leu Ser Glu Val Ala  
 740 745 750  
  
 <210> 474  
 <211> 386  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 474  
 Met Arg Ala Ala Pro Leu Leu Leu Ala Arg Ala Ala Ser Leu Ser Leu  
 5 10 15  
 Gly Phe Leu Phe Leu Leu Phe Phe Trp Leu Asp Arg Ser Val Leu Ala  
 20 25 30  
 Lys Glu Leu Lys Phe Val Thr Leu Val Phe Arg His Gly Asp Arg Ser  
 35 40 45  
 Pro Ile Asp Thr Phe Pro Thr Asp Pro Ile Lys Glu Ser Ser Trp Pro  
 50 55 60  
 Gln Gly Phe Gly Gln Leu Thr Gln Leu Gly Met Glu Gln His Tyr Glu  
 65 70 75 80  
 Leu Gly Glu Tyr Ile Arg Lys Arg Tyr Arg Lys Phe Leu Asn Glu Ser  
 85 90 95  
 Tyr Lys His Glu Gln Val Tyr Ile Arg Ser Thr Asp Val Asp Arg Thr  
 100 105 110  
 Leu Met Ser Ala Met Thr Asn Leu Ala Ala Leu Phe Pro Pro Glu Gly  
 115 120 125  
 Val Ser Ile Trp Asn Pro Ile Leu Leu Trp Gln Pro Ile Pro Val His

153

130                      135                      140  
 Thr Val Pro Leu Ser Glu Asp Gln Leu Leu Tyr Leu Pro Phe Arg Asn  
 145                      150                      155                      160  
 Cys Pro Arg Phe Gln Glu Leu Glu Ser Glu Thr Leu Lys Ser Glu Glu  
                     165                      170                      175  
 Phe Gln Lys Arg Leu His Pro Tyr Lys Asp Phe Ile Ala Thr Leu Gly  
                     180                      185                      190  
 Lys Leu Ser Gly Leu His Gly Gln Asp Leu Phe Gly Ile Trp Ser Lys  
                     195                      200                      205  
 Val Tyr Asp Pro Leu Tyr Cys Glu Ser Val His Asn Phe Thr Leu Pro  
                     210                      215                      220  
 Ser Trp Ala Thr Glu Asp Thr Met Thr Lys Leu Arg Glu Leu Ser Glu  
 225                      230                      235                      240  
 Leu Ser Leu Leu Ser Leu Tyr Gly Ile His Lys Gln Lys Glu Lys Ser  
                     245                      250                      255  
 Arg Leu Gln Gly Gly Val Leu Val Asn Glu Ile Leu Asn His Met Lys  
                     260                      265                      270  
 Arg Ala Thr Gln Ile Pro Ser Tyr Lys Lys Leu Ile Met Tyr Ser Ala  
                     275                      280                      285  
 His Asp Thr Thr Val Ser Gly Leu Gln Met Ala Leu Asp Val Tyr Asn  
                     290                      295                      300  
 Gly Leu Leu Pro Pro Tyr Ala Ser Cys His Leu Thr Glu Leu Tyr Phe  
 305                      310                      315                      320  
 Glu Lys Gly Glu Tyr Phe Val Glu Met Tyr Tyr Arg Asn Glu Thr Gln  
                     325                      330                      335  
 His Glu Pro Tyr Pro Leu Met Leu Pro Gly Cys Ser Pro Ser Cys Pro  
                     340                      345                      350  
 Leu Glu Arg Phe Ala Glu Leu Val Gly Pro Val Ile Pro Gln Asp Trp  
                     355                      360                      365  
 Ser Thr Glu Cys Met Thr Thr Asn Ser His Gln Gly Thr Glu Asp Ser  
                     370                      375                      380  
 Thr Asp  
 385  
  
 <210> 475  
 <211> 261  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 475  
 Met Trp Val Pro Val Val Phe Leu Thr Leu Ser Val Thr Trp Ile Gly  
                     5                      10                      15  
 Ala Ala Pro L u Ile Leu Ser Arg Ile Val Gly Gly Trp Glu Cys Glu  
                     20                      25                      30

Lys His Ser Gln Pro Trp Gln Val Leu Val Ala Ser Arg Gly Arg Ala  
 35 40 45  
 Val Cys Gly Gly Val Leu Val His Pro Gln Trp Val Leu Thr Ala Ala  
 50 55 60  
 His Cys Ile Arg Asn Lys Ser Val Ile Leu Leu Gly Arg His Ser Leu  
 65 70 75 80  
 Phe His Pro Glu Asp Thr Gly Gln Val Phe Gln Val Ser His Ser Phe  
 85 90 95  
 Pro His Pro Leu Tyr Asp Met Ser Leu Leu Lys Asn Arg Phe Leu Arg  
 100 105 110  
 Pro Gly Asp Asp Ser Ser His Asp Leu Met Leu Leu Arg Leu Ser Glu  
 115 120 125  
 Pro Ala Glu Leu Thr Asp Ala Val Lys Val Met Asp Leu Pro Thr Gln  
 130 135 140  
 Glu Pro Ala Leu Gly Thr Thr Cys Tyr Ala Ser Gly Trp Gly Ser Ile  
 145 150 155 160  
 Glu Pro Glu Glu Phe Leu Thr Pro Lys Lys Leu Gln Cys Val Asp Leu  
 165 170 175  
 His Val Ile Ser Asn Asp Val Cys Ala Gln Val His Pro Gln Lys Val  
 180 185 190  
 Thr Lys Phe Met Leu Cys Ala Gly Arg Trp Thr Gly Gly Lys Ser Thr  
 195 200 205  
 Cys Ser Gly Asp Ser Gly Gly Pro Leu Val Cys Asn Gly Val Leu Gln  
 210 215 220  
 Gly Ile Thr Ser Trp Gly Ser Glu Pro Cys Ala Leu Pro Glu Arg Pro  
 225 230 235 240  
 Ser Leu Tyr Thr Lys Val Val His Tyr Arg Lys Trp Ile Lys Asp Thr  
 245 250 255  
 Ile Val Ala Asn Pro  
 260

<210> 476  
 <211> 1079  
 <212> PRT  
 <213> Homo sapiens

<400> 476  
 Met His His His His His Met Trp Val Pro Val Val Phe Leu Thr  
 5 10 15  
 Leu Ser Val Thr Trp Ile Gly Ala Ala Pro Leu Ile Leu Ser Arg Ile  
 20 25 30  
 Val Gly Gly Trp Glu Cys Gln Lys His Ser Gln Pro Trp Gln Val Leu  
 35 40 45



155

Val Ala Ser Arg Gly Arg Ala Val Cys Gly Gly Val Leu Val His Pro  
 50 55 60  
 Gln Trp Val Leu Thr Ala Ala His Cys Ile Arg Asn Lys Ser Val Ile  
 65 70 75 80  
 Leu Leu Gly Arg His Ser Leu Phe His Pro Glu Asp Thr Gly Gln Val  
 85 90 95  
 Phe Gln Val Ser His Ser Phe Pro His Pro Leu Tyr Asp Met Ser Leu  
 100 105 110  
 Leu Lys Asn Arg Phe Leu Arg Pro Gly Asp Asp Ser Ser His Asp Leu  
 115 120 125  
 Met Leu Leu Arg Leu Ser Glu Pro Ala Glu Leu Thr Asp Ala Val Lys  
 130 135 140  
 Val Met Asp Leu Pro Thr Gln Glu Pro Ala Leu Gly Thr Thr Cys Tyr  
 145 150 155 160  
 Ala Ser Gly Trp Gly Ser Ile Glu Pro Glu Glu Phe Leu Thr Pro Lys  
 165 170 175  
 Lys Leu Gln Cys Val Asp Leu His Val Ile Ser Asn Asp Val Cys Ala  
 180 185 190  
 Gln Val His Pro Gln Lys Val Thr Lys Phe Met Leu Cys Ala Gly Arg  
 195 200 205  
 Trp Thr Gly Gly Lys Ser Thr Cys Ser Gly Asp Ser Gly Gly Pro Leu  
 210 215 220  
 Val Cys Asn Gly Val Leu Gln Gly Ile Thr Ser Trp Gly Ser Glu Pro  
 225 230 235 240  
 Cys Ala Leu Pro Glu Arg Pro Ser Leu Tyr Thr Lys Val Val His Tyr  
 245 250 255  
 Arg Lys Trp Ile Lys Asp Thr Ile Val Ala Asn Pro Gly Ser Met Ala  
 260 265 270  
 Thr Ala Gly Asn Pro Trp Gly Trp Phe Leu Gly Tyr Leu Ile Leu Gly  
 275 280 285  
 Val Ala Gly Ser Leu Val Ser Gly Ser Cys Ser Gln Ile Ile Asn Gly  
 290 295 300  
 Glu Asp Cys Ser Pro His Ser Gln Pro Trp Gln Ala Ala Leu Val Met  
 305 310 315 320  
 Glu Asn Glu Leu Phe Cys Ser Gly Val Leu Val His Pro Gln Trp Val  
 325 330 335  
 Leu Ser Ala Ala His Cys Phe Gln Asn Ser Tyr Thr Ile Gly Leu Gly  
 340 345 350  
 Leu His Ser Leu Glu Ala Asp Gln Glu Pro Gly Ser Gln Met Val Glu  
 355 360 365  
 Ala S r Leu Ser Val Arg His Pro Glu Tyr Asn Arg Pro Leu L u Ala  
 370 375 380

Asn Asp Leu Met Leu Ile Lys Leu Asp Glu Ser Val Ser Glu S r Asp  
 385 390 395 400  
 Thr Ile Arg Ser Ile Ser Ile Ala Ser Gln Cys Pro Thr Ala Gly Asn  
 405 410 415  
 Ser Cys Leu Val Ser Gly Trp Gly Leu Leu Ala Asn Gly Arg Met Pro  
 420 425 430  
 Thr Val Leu Gln Cys Val Asn Val Ser Val Val Ser Glu Glu Val Cys  
 435 440 445  
 Ser Lys Leu Tyr Asp Pro Leu Tyr His Pro Ser Met Phe Cys Ala Gly  
 450 455 460  
 Gly Gly Gln Asp Gln Lys Asp Ser Cys Asn Gly Asp Ser Gly Gly Pro  
 465 470 475 480  
 Leu Ile Cys Asn Gly Tyr Leu Gln Gly Leu Val Ser Phe Gly Lys Ala  
 485 490 495  
 Pro Cys Gly Gln Val Gly Val Pro Gly Val Tyr Thr Asn Leu Cys Lys  
 500 505 510  
 Phe Thr Glu Trp Ile Glu Lys Thr Val Gln Ala Ser Glu Phe Met Val  
 515 520 525  
 Gln Arg Leu Trp Val Ser Arg Leu Leu Arg His Arg Lys Ala Gln Leu  
 530 535 540  
 Leu Leu Val Asn Leu Leu Thr Phe Gly Leu Glu Val Cys Leu Ala Ala  
 545 550 555 560  
 Gly Ile Thr Tyr Val Pro Pro Leu Leu Leu Glu Val Gly Val Glu Glu  
 565 570 575  
 Lys Phe Met Thr Met Val Leu Gly Ile Gly Pro Val Leu Gly Leu Val  
 580 585 590  
 Cys Val Pro Leu Leu Gly Ser Ala Ser Asp His Trp Arg Gly Arg Tyr  
 595 600 605  
 Gly Arg Arg Arg Pro Phe Ile Trp Ala Leu Ser Leu Gly Ile Leu Leu  
 610 615 620  
 Ser Leu Phe Leu Ile Pro Arg Ala Gly Trp Leu Ala Gly Leu Leu Cys  
 625 630 635 640  
 Pro Asp Pro Arg Pro Leu Glu Leu Ala Leu Leu Ile Leu Gly Val Gly  
 645 650 655  
 Leu Leu Asp Phe Cys Gly Gln Val Cys Phe Thr Pro Leu Glu Ala Leu  
 660 665 670  
 Leu Ser Asp Leu Phe Arg Asp Pro Asp His Cys Arg Gln Ala Tyr S r  
 675 680 685  
 Val Tyr Ala Phe Met Il Ser Leu Gly Gly Cys Leu Gly Tyr Leu Leu  
 690 695 700  
 Pro Ala Ile Asp Trp Asp Thr Ser Ala Leu Ala Pro Tyr Leu Gly Thr

705	710	715	720
Gln Glu Glu Cys Leu Phe Gly Leu Leu Thr Leu Ile Phe Leu Thr Cys	725	730	735
Val Ala Ala Thr Leu Leu Val Ala Glu Glu Ala Ala Leu Gly Pro Thr	740	745	750
Glu Pro Ala Glu Gly Leu Ser Ala Pro Ser Leu Ser Pro His Cys Cys	755	760	765
Pro Cys Arg Ala Arg Leu Ala Phe Arg Asn Leu Gly Ala Leu Leu Pro	770	775	780
Arg Leu His Gln Leu Cys Cys Arg Met Pro Arg Thr Leu Arg Arg Leu	785	790	795
Phe Val Ala Glu Leu Cys Ser Trp Met Ala Leu Met Thr Phe Thr Leu	805	810	815
Phe Tyr Thr Asp Phe Val Gly Glu Gly Leu Tyr Gln Gly Val Pro Arg	820	825	830
Ala Glu Pro Gly Thr Glu Ala Arg Arg His Tyr Asp Glu Gly Val Arg	835	840	845
Met Gly Ser Leu Gly Leu Phe Leu Gln Cys Ala Ile Ser Leu Val Phe	850	855	860
Ser Leu Val Met Asp Arg Leu Val Gln Arg Phe Gly Thr Arg Ala Val	865	870	875
Tyr Leu Ala Ser Val Ala Ala Phe Pro Val Ala Ala Gly Ala Thr Cys	885	890	895
Leu Ser His Ser Val Ala Val Val Thr Ala Ser Ala Ala Leu Thr Gly	900	905	910
Phe Thr Phe Ser Ala Leu Gln Ile Leu Pro Tyr Thr Leu Ala Ser Leu	915	920	925
Tyr His Arg Glu Lys Gln Val Phe Leu Pro Lys Tyr Arg Gly Asp Thr	930	935	940
Gly Gly Ala Ser Ser Glu Asp Ser Leu Met Thr Ser Phe Leu Pro Gly	945	950	955
Pro Lys Pro Gly Ala Pro Phe Pro Asn Gly His Val Gly Ala Gly Gly	965	970	975
Ser Gly Leu Leu Pro Pro Pro Pro Ala Leu Cys Gly Ala Ser Ala Cys	980	985	990
Asp Val Ser Val Arg Val Val Val Gly Glu Pro Thr Glu Ala Arg Val	995	1000	1005
Val Pro Gly Arg Gly Il Cys Leu Asp Leu Ala Ile Leu Asp Ser Ala	1010	1015	1020
Phe Leu Leu S r Gln Val Ala Pro Ser Leu Phe Met Gly Ser Ile Val	1025	1030	1035
			1040

158

Gln Leu Ser Gln Ser Val Thr Ala Tyr Met Val Ser Ala Ala Gly Leu  
1045 1050 1055

Gly Leu Val Ala Ile Tyr Phe Ala Thr Gln Val Val Phe Asp Lys Ser  
1060 1065 1070

Asp Leu Ala Lys Tyr Ser Ala  
1075